RECORD OF COMMUNICATION
REGIONAL SAMPLE CONTROL CENTER
ROC #5

231778

TDF# Hwss

DATE: 1/16/2008
SUBJECT: CLP Data Package for Quality Assurance Review
FROM: Hazardous Waste Support Section (HWSS)/RSCC
TO: HWSS ESAT-TOPO

Attached is the following ORGANIC Data Package to be reviewed for Quality Assurance

SITE: Cornell Dubilier **CASE #: 37088**

SDG#: B4JB1, B4JC3, B4JK1, B4QE0 **SAMPLER: W-RST**

		#SAMPLES	MATRIX
PROJ. CODE: RS	**SITE SPILL #: GZ**		
LAB: MITKEM	**OPERABLE UNIT: 00**	47	Soil
TURN-AROUND-TIME: 21 day		14	Water
CERCLIS ID #: NJD981557879		**FRACTION:**	PCBs

Contaminant(s) of Concern (If known)

REGION II RSCC DATA TRANSFER LOG

Relinquished By Signature	Date/Time	Received By Signature	Date/Time
[signature]	2/14/08 11:45 AM	[signature]	2/14/08 11:15 AM
[signature]	2/20/08 4PM	[signature]	2/21/08 7:00 pm
[signature]	2/28/08 10 AM	[signature]	2/28/08 10 AM
[signature]	2/28/08 3:30	[signature]	2/28/08 3:30 pm

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QE0

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-01A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3493F.D/E1G3493R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QE1

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-02A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3494F.D/E1G3494R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QE2

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-03A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3495F.D/E1G3495R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QE3

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-04A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3496F.D/E1G3496R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QE4

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-05A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3497F.D/E1G3497R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QE5

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-06A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3498F.D/E1G3498R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QE6

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-07A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3499F.D/E1G3499R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QE7

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-08A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3500F.D/E1G3500R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QE8

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-09A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3501F.D/E1G3501R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QE9

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-10A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3502F.D/E1G3502R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QF0

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-11A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3503F.D/E1G3503R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QF1

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-12A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3504F.D/E1G3504R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QF2

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-13A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3507F.D/E1G3507R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4QF3

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: 1508.0 SDG No.: B4QE0

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: F1937-14A

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E1G3508F.D/E1G3508R.D

% Moisture: Decanted: (Y/N) N Date Received: 12/28/2007

Extraction: (Type) SEPF Date Extracted: 12/29/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/03/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JB1

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-01A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E1G3221F.D/E1G3221R.D

% Moisture: 21 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/28/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	* 1400 ~~1000~~	~~U~~ J
11096-82-5	Aroclor-1260	41	U
37324-23-5	Aroclor-1262	41	U
11100-14-4	Aroclor-1268	41	U

* Transferred from B4JB1DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JB2

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1912-02A

Sample wt/vol: 30.3 (g/mL) G | Lab File ID: E1G3296F.D/E1G3296R.D

% Moisture: 26 | Decanted: (Y/N) N | Date Received: 12/20/2007

Extraction: (Type) SONC | Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 10.0

GPC Cleanup: (Y/N) N | pH: 6.1 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	440	U
11104-28-2	Aroclor-1221	440	U
11141-16-5	Aroclor-1232	440	U
53469-21-9	Aroclor-1242	440	U
12672-29-6	Aroclor-1248	440	U
11097-69-1	Aroclor-1254	* 46000 ~~28000~~	~~P~~ J
11096-82-5	Aroclor-1260	440	U
37324-23-5	Aroclor-1262	440	U
11100-14-4	Aroclor-1268	440	U

* Transferred from B4JB2DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JB3

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1912-03A

Sample wt/vol: 30.1 (g/mL) G | Lab File ID: E1G3293F.D/E1G3293R.D

% Moisture: 20 | Decanted: (Y/N) N | Date Received: 12/20/2007

Extraction: (Type) SONC | Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 12/29/2007

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 10.0

GPC Cleanup: (Y/N) N | pH: 6.2 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	410	U
11104-28-2	Aroclor-1221	410	U
11141-16-5	Aroclor-1232	410	U
53469-21-9	Aroclor-1242	410	U
12672-29-6	Aroclor-1248	410	U
11097-69-1	Aroclor-1254	* 37000 ~~27000~~	~~E~~
11096-82-5	Aroclor-1260	410	U
37324-23-5	Aroclor-1262	410	U
11100-14-4	Aroclor-1268	410	U

* Transferred from B4JB3DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JB4

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-04A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E1G3226F.D/E1G3226R.D

% Moisture: 19 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/28/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	* 1900 ~~1600~~	~~E~~
11096-82-5	Aroclor-1260	40	U
37324-23-5	Aroclor-1262	40	U
11100-14-4	Aroclor-1268	40	U

* Transferred from B4JB4DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JB5

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-05A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E1G3227F.D/E1G3227R.D

% Moisture: 21 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/28/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	* 2200 ~~2100~~	~~E~~
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

* Transferred from B4J35DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JB6

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-06A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E1G3228F.D/E1G3228R.D

% Moisture: 28 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/28/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	46	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	* 3000 ~~2400~~	~~E~~
11096-82-5	Aroclor-1260	46	U
37324-23-5	Aroclor-1262	46	U
11100-14-4	Aroclor-1268	46	U

* Transf. from B4JB6DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JB7

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1912-07A

Sample wt/vol: 30.1 (g/mL) G | Lab File ID: E1G3229F.D/E1G3229R.D

% Moisture: 16 | Decanted: (Y/N) N | Date Received: 12/20/2007

Extraction: (Type) SONC | Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 12/28/2007

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 1.0

GPC Cleanup: (Y/N) N | pH: 6.1 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	* 1800 ~~1500~~	~~E~~
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

* Transfer from B4JB7DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JB8

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-08A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E1G3230F.D/E1G3230R.D

% Moisture: 18 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/28/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	* 2600 ~~1900~~	~~U~~
11096-82-5	Aroclor-1260	40	U
37324-23-5	Aroclor-1262	40	U
11100-14-4	Aroclor-1268	40	U

* Transf. from B4JB8DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JB9

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-09A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E1G3298F.D/E1G3298R.D

% Moisture: 39 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	1100	U
11104-28-2	Aroclor-1221	1100	U
11141-16-5	Aroclor-1232	1100	U
53469-21-9	Aroclor-1242	1100	U
12672-29-6	Aroclor-1248	1100	U
11097-69-1	Aroclor-1254	* 91000 ~~68000~~	~~U~~
11096-82-5	Aroclor-1260	1100	U
37324-23-5	Aroclor-1262	1100	U
11100-14-4	Aroclor-1268	1100	U

* Transf. from B4JB9DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JC0

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1912-10A

Sample wt/vol: 30.0 (g/mL) G | Lab File ID: E1G3300F.D/E1G3300R.D

% Moisture: 40 | Decanted: (Y/N) N | Date Received: 12/20/2007

Extraction: (Type) SONC | Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 20.0

GPC Cleanup: (Y/N) N | pH: 6.8 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	1100	U
11104-28-2	Aroclor-1221	1100	U
11141-16-5	Aroclor-1232	1100	U
53469-21-9	Aroclor-1242	1100	U
12672-29-6	Aroclor-1248	1100	U
11097-69-1	Aroclor-1254	*180,000 ~~120000~~	~~E~~
11096-82-5	Aroclor-1260	1100	U
37324-23-5	Aroclor-1262	1100	U
11100-14-4	Aroclor-1268	1100	U

* Trans. from B4JC0DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JC1

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-11A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E1G3302F.D/E1G3302R.D

% Moisture: 38 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	530	U
11104-28-2	Aroclor-1221	530	U
11141-16-5	Aroclor-1232	530	U
53469-21-9	Aroclor-1242	530	U
12672-29-6	Aroclor-1248	530	U
11097-69-1	Aroclor-1254	* 34,000 ~~24000~~	E
11096-82-5	Aroclor-1260	530	U
37324-23-5	Aroclor-1262	530	U
11100-14-4	Aroclor-1268	530	U

* Transf from B4JC1 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JC2

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1912-12A

Sample wt/vol: 30.4 (g/mL) G | Lab File ID: E1G3304F.D/E1G3304R.D

% Moisture: 39 | Decanted: (Y/N) N | Date Received: 12/20/2007

Extraction: (Type) SONC | Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 5.0

GPC Cleanup: (Y/N) N | pH: 6.4 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	270	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	* 20,000 ~~15000~~	E
11096-82-5	Aroclor-1260	270	U
37324-23-5	Aroclor-1262	270	U
11100-14-4	Aroclor-1268	270	U

* Transf from B4JC2DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JC4

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-13A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E1G3306F.D/E1G3306R.D

% Moisture: 17 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	79	U
11104-28-2	Aroclor-1221	79	U
11141-16-5	Aroclor-1232	79	U
53469-21-9	Aroclor-1242	79	U
12672-29-6	Aroclor-1248	79	U
11097-69-1	Aroclor-1254	* 3500 ~~2600~~	~~E~~
11096-82-5	Aroclor-1260	79	U
37324-23-5	Aroclor-1262	79	U
11100-14-4	Aroclor-1268	79	U

* Transf from B4JC4DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JC5

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-14A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E1G3236F.D/E1G3236R.D

% Moisture: 30 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/28/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	46	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	* 3400 ~~3200~~	~~E~~
11096-82-5	Aroclor-1260	46	U
37324-23-5	Aroclor-1262	46	U
11100-14-4	Aroclor-1268	46	U

* Transf from B4JC5DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JC6

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1912-15A

Sample wt/vol: 30.2 (g/mL) G | Lab File ID: E1G3309F.D/E1G3309R.D

% Moisture: 29 | Decanted: (Y/N) N | Date Received: 12/20/2007

Extraction: (Type) SONC | Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 5.0

GPC Cleanup: (Y/N) N | pH: 6.4 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	* 11000 8600	D
11096-82-5	Aroclor-1260	230	U
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

* Transf from B4JC6DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JC7

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-16A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E1G3238F.D/E1G3238R.D

% Moisture: 26 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/28/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	45	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	45	U
12672-29-6	Aroclor-1248	45	U
11097-69-1	Aroclor-1254	* 3700 ~~2600~~	~~U~~
11096-82-5	Aroclor-1260	45	U
37324-23-5	Aroclor-1262	45	U
11100-14-4	Aroclor-1268	45	U

* Transf from B4JC7DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JC8

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-17A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E1G3316F.D/E1G3316R.D

% Moisture: 23 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	* 13000 ~~12000~~	~~E~~
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

* Transf from B4JC8DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JC9

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-18A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E1G3542F.D/E1G3542R.D

% Moisture: 23 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	* 2450 ~~1400~~	~~P~~ J
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

* Transf from B4JC9 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JD0

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-19A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E1G3319F.D/E1G3319R.D

% Moisture: 21 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	84	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	84	U
53469-21-9	Aroclor-1242	84	U
12672-29-6	Aroclor-1248	84	U
11097-69-1	Aroclor-1254	* 5300 ~~3600~~	~~P~~ J
11096-82-5	Aroclor-1260	84	U
37324-23-5	Aroclor-1262	84	U
11100-14-4	Aroclor-1268	84	U

* Transf from B4JD0DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JD1

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JB1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1912-20A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E1G3321F.D/E1G3321R.D

% Moisture: 23 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	86	U
11104-28-2	Aroclor-1221	86	U
11141-16-5	Aroclor-1232	86	U
53469-21-9	Aroclor-1242	86	U
12672-29-6	Aroclor-1248	86	U
11097-69-1	Aroclor-1254	* 9900 ~~7500~~	~~U~~ J
11096-82-5	Aroclor-1260	86	U
37324-23-5	Aroclor-1262	86	U
11100-14-4	Aroclor-1268	86	U

* Transf from B4JD1DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JK1

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JK1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1926-07A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E1G3539F.D/E1G3539R.D

% Moisture: 36 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	51	U
11104-28-2	Aroclor-1221	51	U
11141-16-5	Aroclor-1232	51	U
53469-21-9	Aroclor-1242	51	U
12672-29-6	Aroclor-1248	51	U
11097-69-1	Aroclor-1254	5100 ~~4000~~	E *
11096-82-5	Aroclor-1260	51	U
37324-23-5	Aroclor-1262	51	U
11100-14-4	Aroclor-1268	51	U

* From B4JK1DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JK3

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JK1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1926-01A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E1G3567F.D/E1G3567R.D

% Moisture: 25 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	2200	U
11104-28-2	Aroclor-1221	2200	U
11141-16-5	Aroclor-1232	2200	U
53469-21-9	Aroclor-1242	2200	U
12672-29-6	Aroclor-1248	2200	U
11097-69-1	Aroclor-1254	120000 ~~100000~~	~~E~~ J *
11096-82-5	Aroclor-1260	2200	U
37324-23-5	Aroclor-1262	2200	U
11100-14-4	Aroclor-1268	2200	U

* From B4JK3DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JK4

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JK1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1926-02A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E1G3569F.D/E1G3569R.D

% Moisture: 26 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	2200	U
11104-28-2	Aroclor-1221	2200	U
11141-16-5	Aroclor-1232	2200	U
53469-21-9	Aroclor-1242	2200	U
12672-29-6	Aroclor-1248	2200	U
11097-69-1	Aroclor-1254	140000 ~~120000~~	~~EP~~ J *
11096-82-5	Aroclor-1260	2200	U
37324-23-5	Aroclor-1262	2200	U
11100-14-4	Aroclor-1268	2200	U

* From B4JK4DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JK5

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JK1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1926-03A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E1G3571F.D/E1G3571R.D

% Moisture: 56 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	370	U
11104-28-2	Aroclor-1221	370	U
11141-16-5	Aroclor-1232	370	U
53469-21-9	Aroclor-1242	370	U
12672-29-6	Aroclor-1248	370	U
11097-69-1	Aroclor-1254	19000 ~~14000~~	~~P~~ J *
11096-82-5	Aroclor-1260	370	U
37324-23-5	Aroclor-1262	370	U
11100-14-4	Aroclor-1268	370	U

* From B4JK5DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JK6

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JK1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1926-04A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E1G3536F.D/E1G3536R.D

% Moisture: 14 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 4.5 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	38	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	1200 ~~990~~	~~EP~~ J *
11096-82-5	Aroclor-1260	38	U
37324-23-5	Aroclor-1262	38	U
11100-14-4	Aroclor-1268	38	U

* From B4JK6DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JK7

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JK1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1926-05A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E1G3574F.D/E1G3574R.D

% Moisture: 25 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/05/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: 5.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	2200	U
11104-28-2	Aroclor-1221	2200	U
11141-16-5	Aroclor-1232	2200	U
53469-21-9	Aroclor-1242	2200	U
12672-29-6	Aroclor-1248	2200	U
11097-69-1	Aroclor-1254	98000 ~~46000~~	~~EP~~ J*
11096-82-5	Aroclor-1260	2200	U
37324-23-5	Aroclor-1262	2200	U
11100-14-4	Aroclor-1268	2200	U

*From B4JK7DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JK8

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JK1

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1926-06A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E1G3538F.D/E1G3538R.D

% Moisture: 22 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/28/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 5.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	3100 ~~2300~~	J *
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

* From B4JK8DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JC3

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-01A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E2G8083F.D/E2G8083R.D

% Moisture: 21 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/28/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	290	
11096-82-5	Aroclor-1260	41	U
37324-23-5	Aroclor-1262	41	U
11100-14-4	Aroclor-1268	41	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JD3

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1913-02A

Sample wt/vol: 30.4 (g/mL) G | Lab File ID: E2G8130F.D/E2G8130R.D

% Moisture: 23 | Decanted: (Y/N) N | Date Received: 12/20/2007

Extraction: (Type) SONC | Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 12/29/2007

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 10.0

GPC Cleanup: (Y/N) N | pH: 5.6 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	420	U
11104-28-2	Aroclor-1221	420	U
11141-16-5	Aroclor-1232	420	U
53469-21-9	Aroclor-1242	420	U
12672-29-6	Aroclor-1248	420	U
11097-69-1	Aroclor-1254	10000 ~~7700~~	E *
11096-82-5	Aroclor-1260	420	U
37324-23-5	Aroclor-1262	420	U
11100-14-4	Aroclor-1268	420	U

* From B4JD3 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JD4

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-03A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E2G8132F.D/E2G8132R.D

% Moisture: 28 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/29/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 5.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	450	U
11104-28-2	Aroclor-1221	450	U
11141-16-5	Aroclor-1232	450	U
53469-21-9	Aroclor-1242	450	U
12672-29-6	Aroclor-1248	450	U
11097-69-1	Aroclor-1254	16000 ~~11000~~	E *
11096-82-5	Aroclor-1260	450	U
37324-23-5	Aroclor-1262	450	U
11100-14-4	Aroclor-1268	450	U

* From B4JD4 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JD5

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-04A

Sample wt/vol: 30.4 (g/mL) G Lab File ID: E2G8134F.D/E2G8134R.D

% Moisture: 37 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/29/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	520	U
11104-28-2	Aroclor-1221	520	U
11141-16-5	Aroclor-1232	520	U
53469-21-9	Aroclor-1242	520	U
12672-29-6	Aroclor-1248	520	U
11097-69-1	Aroclor-1254	15000 ~~12000~~	P *
11096-82-5	Aroclor-1260	520	U
37324-23-5	Aroclor-1262	520	U
11100-14-4	Aroclor-1268	520	U

* From B4JD5DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JD6

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-05A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2G8495F.D/E2G8495R.D

% Moisture: 31 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/07/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	95	U
11104-28-2	Aroclor-1221	95	U
11141-16-5	Aroclor-1232	95	U
53469-21-9	Aroclor-1242	95	U
12672-29-6	Aroclor-1248	95	U
11097-69-1	Aroclor-1254	7400 ~~5100~~	E ~~X~~
11096-82-5	Aroclor-1260	95	U
37324-23-5	Aroclor-1262	95	U
11100-14-4	Aroclor-1268	95	U

X From B4JD6DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JD7

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-06A

Sample wt/vol: 30.4 (g/mL) G Lab File ID: E2G8137F.D/E2G8137R.D

% Moisture: 45 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/29/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 6.6 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	590	U
11104-28-2	Aroclor-1221	590	U
11141-16-5	Aroclor-1232	590	U
53469-21-9	Aroclor-1242	590	U
12672-29-6	Aroclor-1248	590	U
11097-69-1	Aroclor-1254	19000 ~~16000~~	J *
11096-82-5	Aroclor-1260	590	U
37324-23-5	Aroclor-1262	590	U
11100-14-4	Aroclor-1268	590	U

* From B4JD7 JL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JD8

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1913-07A

Sample wt/vol: 30.2 (g/mL) G | Lab File ID: E2G8139F.D/E2G8139R.D

% Moisture: 42 | Decanted: (Y/N) N | Date Received: 12/20/2007

Extraction: (Type) SONC | Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 12/29/2007

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 10.0

GPC Cleanup: (Y/N) N | pH: 6.6 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	570	U
11104-28-2	Aroclor-1221	570	U
11141-16-5	Aroclor-1232	570	U
53469-21-9	Aroclor-1242	570	U
12672-29-6	Aroclor-1248	570	U
11097-69-1	Aroclor-1254	27000 ~~20000~~	E *
11096-82-5	Aroclor-1260	570	U
37324-23-5	Aroclor-1262	570	U
11100-14-4	Aroclor-1268	570	U

* From B4JD8DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JD9

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-08A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2G8099F.D/E2G8099R.D

% Moisture: 43 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/29/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	58	U
11104-28-2	Aroclor-1221	58	U
11141-16-5	Aroclor-1232	58	U
53469-21-9	Aroclor-1242	58	U
12672-29-6	Aroclor-1248	58	U
11097-69-1	Aroclor-1254	5700 ~~3000~~	~~EP~~ J *
11096-82-5	Aroclor-1260	58	U
37324-23-5	Aroclor-1262	58	U
11100-14-4	Aroclor-1268	58	U

* From B4JD9DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JE0

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-09A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E2G8100F.D/E2G8100R.D

% Moisture: 40 Decanted: (Y/N) N Date Received: 12/20/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/29/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 5.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	54	U
11104-28-2	Aroclor-1221	54	U
11141-16-5	Aroclor-1232	54	U
53469-21-9	Aroclor-1242	54	U
12672-29-6	Aroclor-1248	54	U
11097-69-1	Aroclor-1254	5300 ~~3200~~	E *
11096-82-5	Aroclor-1260	54	U
37324-23-5	Aroclor-1262	54	U
11100-14-4	Aroclor-1268	54	U

* From B4JE0 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JE1

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1913-10A

Sample wt/vol: 30.5 (g/mL) G | Lab File ID: E2G8101F.D/E2G8101R.D

% Moisture: 46 | Decanted: (Y/N) N | Date Received: 12/20/2007

Extraction: (Type) SONC | Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 12/29/2007

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 1.0

GPC Cleanup: (Y/N) N | pH: 6.2 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	60	U
11104-28-2	Aroclor-1221	60	U
11141-16-5	Aroclor-1232	60	U
53469-21-9	Aroclor-1242	60	U
12672-29-6	Aroclor-1248	60	U
11097-69-1	Aroclor-1254	2800 ~~1700~~	E/*
11096-82-5	Aroclor-1260	60	U
37324-23-5	Aroclor-1262	60	U
11100-14-4	Aroclor-1268	60	U

* From B4JE1DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JE2

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-11A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2G8190F.D/E2G8190R.D

% Moisture: 32 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 5.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	480	U
11104-28-2	Aroclor-1221	480	U
11141-16-5	Aroclor-1232	480	U
53469-21-9	Aroclor-1242	480	U
12672-29-6	Aroclor-1248	480	U
11097-69-1	Aroclor-1254	17000 ~~13000~~	P *
11096-82-5	Aroclor-1260	480	U
37324-23-5	Aroclor-1262	480	U
11100-14-4	Aroclor-1268	480	U

* From B4JE2DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JE3

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-12A

Sample wt/vol: 30.1 (g/mL) G Lab File ID: E2G8192F.D/E2G8192R.D

% Moisture: 27 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 5.5 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	450	U
11104-28-2	Aroclor-1221	450	U
11141-16-5	Aroclor-1232	450	U
53469-21-9	Aroclor-1242	450	U
12672-29-6	Aroclor-1248	450	U
11097-69-1	Aroclor-1254	19000 ~~14000~~	E *
11096-82-5	Aroclor-1260	450	U
37324-23-5	Aroclor-1262	450	U
11100-14-4	Aroclor-1268	450	U

* From B4JE3 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JE4

Lab Name: MITKEM LABORATORIES | Contract: EP-W-05-030

Lab Code: MITKEM | Case No.: 37088 | Mod. Ref No.: | SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: F1913-13A

Sample wt/vol: 30.2 (g/mL) G | Lab File ID: E2G8111F.D/E2G8111R.D

% Moisture: 33 | Decanted: (Y/N) N | Date Received: 12/21/2007

Extraction: (Type) SONC | Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) | Date Analyzed: 12/29/2007

Injection Volume: 1.0 (uL) | GPC Factor: 1.00 | Dilution Factor: 1.0

GPC Cleanup: (Y/N) N | pH: 6.6 | Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	49	U
12672-29-6	Aroclor-1248	49	U
11097-69-1	Aroclor-1254	3800 ~~2200~~	~~EP~~ ~~J~~ *
11096-82-5	Aroclor-1260	49	U
37324-23-5	Aroclor-1262	49	U
11100-14-4	Aroclor-1268	49	U

* From B4JE4DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JE6

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-14A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E2G8497F.D/E2G8497R.D

% Moisture: 31 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/07/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	95	U
11104-28-2	Aroclor-1221	95	U
11141-16-5	Aroclor-1232	95	U
53469-21-9	Aroclor-1242	95	U
12672-29-6	Aroclor-1248	95	U
11097-69-1	Aroclor-1254	7200 ~~4900~~	~~E~~ J *
11096-82-5	Aroclor-1260	95	U
37324-23-5	Aroclor-1262	95	U
11100-14-4	Aroclor-1268	95	U

* From B4JE6 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JE7

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-15A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2G8113F.D/E2G8113R.D

% Moisture: 38 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/29/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	53	U
11104-28-2	Aroclor-1221	53	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	53	U
11097-69-1	Aroclor-1254	4800 ~~2700~~	EP *
11096-82-5	Aroclor-1260	53	U
37324-23-5	Aroclor-1262	53	U
11100-14-4	Aroclor-1268	53	U

* From B4JE7DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JE8

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-16A

Sample wt/vol: 30.3 (g/mL) G Lab File ID: E2G8197F.D/E2G8197R.D

% Moisture: 16 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 5.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	600	
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JE9

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-17A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2G8115F.D/E2G8115R.D

% Moisture: 17 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/29/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 5.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	1600 ~~780~~	U *
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

* From B4JE9

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JF0

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-18A

Sample wt/vol: 30.0 (g/mL) G Lab File ID: E2G8498F.D/E2G8498R.D

% Moisture: 20 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/07/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 5.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	83	U
11104-28-2	Aroclor-1221	83	U
11141-16-5	Aroclor-1232	83	U
53469-21-9	Aroclor-1242	83	U
12672-29-6	Aroclor-1248	83	U
11097-69-1	Aroclor-1254	5600 ~~2500~~	~~UP~~ J *
11096-82-5	Aroclor-1260	83	U
37324-23-5	Aroclor-1262	83	U
11100-14-4	Aroclor-1268	83	U

* B4JF0DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JF1

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-19A

Sample wt/vol: 30.2 (g/mL) G Lab File ID: E2G8201F.D/E2G8201R.D

% Moisture: 33 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/30/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 6.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	490	U
11104-28-2	Aroclor-1221	490	U
11141-16-5	Aroclor-1232	490	U
53469-21-9	Aroclor-1242	490	U
12672-29-6	Aroclor-1248	490	U
11097-69-1	Aroclor-1254	13000 ~~9600~~	D ~~*~~
11096-82-5	Aroclor-1260	490	U
37324-23-5	Aroclor-1262	490	U
11100-14-4	Aroclor-1268	490	U

* From B4JF1 DL

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B4JF2

Lab Name: MITKEM LABORATORIES Contract: EP-W-05-030

Lab Code: MITKEM Case No.: 37088 Mod. Ref No.: SDG No.: B4JC3

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: F1913-20A

Sample wt/vol: 30.5 (g/mL) G Lab File ID: E2G8118F.D/E2G8118R.D

% Moisture: 35 Decanted: (Y/N) N Date Received: 12/21/2007

Extraction: (Type) SONC Date Extracted: 12/27/2007

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 12/29/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.00 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	50	U
11104-28-2	Aroclor-1221	50	U
11141-16-5	Aroclor-1232	50	U
53469-21-9	Aroclor-1242	50	U
12672-29-6	Aroclor-1248	50	U
11097-69-1	Aroclor-1254	4800 ~~3300~~	E *
11096-82-5	Aroclor-1260	50	U
37324-23-5	Aroclor-1262	50	U
11100-14-4	Aroclor-1268	50	U

* From B4JF2DL

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 37088
LABORATORY: MITKEM

SDG No.: B4QE0
SITE: CORNELL-DUBILIER
ANALYSIS: 20(S) PCB

DATA ASSESSMENT

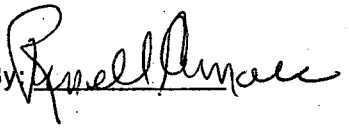
The current SOP HW-37 (Revision 1.2) August, 2007, USEPA Region II Data Validation SOP for Statement of Work SOM01.2 for evaluating organic data have been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material, "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's
Signature: Israel Okwuonu

Date: February 25, 2008

Verified By: 

Date: 2/28/2008

1.HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.
The following action was taken in the samples and analytes shown due to excessive holding time.
The following Aroclor samples were extracted outside both Technical, and Contractual criteria. Hits are qualified "J", and non-detects are qualified "UJ".

No problems found.

2. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

No problems found for this qualification.

3. MATRIX SPIKE/SPIKE DUPLICATE, LCS (Lab Control Sample):

The LCS data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The LCS may be used in conjunction with other QC criteria for additional qualification of data.

No problems found for this qualification

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects, "U".
The following analytes in the sample shown were qualified with "U" for these reasons:

A) Method blank contamination:

No problems found for this qualification

B) Field or rinse blank contamination:

Not applicable

5. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

For the PCB fraction, if %RSD exceeds 20% for any analytes except for the two surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".
The following analytes in the sample shown were qualified for %RSD.

No problems found.

B) The following Aroclor samples are associated with a closing CCV in which the % D of calibration factors exceeded 50%. Hits are qualified "J" and non-detects are qualified "UJ".

No problems found.

6. COMPOUND IDENTIFICATION:

A) PCB Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.
The following pesticide samples have percent difference (%D) between Columns that exceeds primary criteria. Hits are qualified "J".

No problem found for this qualification.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

No problems found.

11. FIELD DOCUMENTATION: No problems found.

12. OTHER PROBLEMS: None

13. This package contains re-extractions, re-analyses or dilutions, upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.

None

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 37088
LABORATORY: MITKEM

SDG No.: B4JB1
SITE: CORNELL-DUBILIER
ANALYSIS: 20(S) PCB

DATA ASSESSMENT

The current SOP HW-37 (Revision 1.2) August, 2007, USEPA Region II Data Validation SOP for Statement of Work SOM01.2 for evaluating organic data have been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material, "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's
Signature: Israel Okwuonu

Date: February 25, 2008

Verified By: Ronell Amaee

Date: 2/28/2008

1.HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.
The following action was taken in the samples and analytes shown due to excessive holding time.

The following Aroclor samples were extracted outside both Technical, and Contractual criteria. Hits are qualified "J", and non-detects are qualified "UJ".

No problems found.

2. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

The following aroclor samples have surrogate percent recoveries which exceed the primary maximum criteria but are less than or equal to the expanded maximum criteria. Detected compounds are qualified J. Non-detected compounds are not qualified.

Decachlorobiphenyl: B4JC0DL

Aroclor-1254

3. MATRIX SPIKE/SPIKE DUPLICATE, LCS (Lab Control Sample):

The LCS data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The LCS may be used in conjunction with other QC criteria for additional qualification of data.

The relative percent difference (RPD) between the following aroclor matrix spike and matrix spike duplicate recoveries is outside criteria. Detected compounds are qualified J. Non-detected compounds are not qualified.

Aroclor-1260: B4JB3MSD
Aroclor-1016: B4JB3MSD

The following Aroclor matrix/matrix spike duplicate samples have percent recoveries that are greater than the upper acceptance limit Detected compounds are qualified J. Non-detected compounds are not qualified.

Aroclor-1260: B4JB3MS, B4JB3MSD
Aroclor-1016: B4JB3MS, B4JB3MSD

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects, "U".
The following analytes in the sample shown were qualified with "U" for these reasons:

A) Method blank contamination:

No problems found for this qualification

B) Field or rinse blank contamination:

No problems found for this qualification. There is no associated field blank with these samples.

5. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

For the PCB fraction, if %RSD exceeds 20% for any analytes except for the two surrogates

(which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".
The following analytes in the sample shown were qualified for %RSD.

No problems found.

B) The following Aroclor samples are associated with a closing CCV in which the % D of calibration factors exceeded 50%. Hits are qualified "J" and non-detects are qualified "UJ".

No problems found.

6. COMPOUND IDENTIFICATION:

A) PCB Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

Detection Limit:
ADL312

The following aroclor samples have percent differences between analyte results in the range of 26-70%. Detected compounds are qualified J. Non-detected compounds are not qualified.

Aroclor-1254: B4JB1, B4JB1DL, B4JB5DL, B4JB6DL, B4JB8DL, B4JC0DL, B4JC4DL, B4JC5DL, B4JC6DL, B4JC7DL, B4JC8DL, B4JC9, B4JD0, B4JD0DL, B4JD1, B4JD1DL

10. CONTRACT PROBLEMS NON-COMPLIANCE:

No problems found.

11. FIELD DOCUMENTATION: No problems found.

12. OTHER PROBLEMS: None

13. This package contains reextractions, reanalyses or dilutions, upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.

B4JB1DL, B4JB2DL, B4JB3DL, B4JB4DL, B4JB5DL, B4JB6DL, B4JB7DL, B4JB8DL, B4JB9DL, B4JC0DL, B4JC1DL, B4JC2DL, B4JC4DL, B4JC5DL, B4JC6DL, B4JC7DL, B4JC8DL, B4JC9DL B4JD0DL, B4JD1DL

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 37088
LABORATORY: MITKEM

SDG No.: B4JK1
SITE: CORNELL-DUBLIER
ANALYSIS: 7(S) PCB

DATA ASSESSMENT

The current SOP HW-37 (Revision 1.2) August, 2007, USEPA Region II Data Validation SOP for Statement of Work SOM01.2 for evaluating organic data have been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material, "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's Signature: David Rosenberg

Date: February 20, 2008

Verified By:

Date: 2/28/2008

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.
The following action was taken in the samples and analytes shown due to excessive holding time.

The following Aroclor samples were extracted outside both Technical, and Contractual criteria. Hits are qualified "J", and non-detects are qualified "UJ".

No problems found.

2. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

No problems found for this qualification.

3. MATRIX SPIKE/SPIKE DUPLICATE, LCS (Lab Control Sample):

The LCS data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The LCS may be used in conjunction with other QC criteria for additional qualification of data.

Matrix Spikes AROCLOR

AMS1 The relative percent difference (RPD) between the following aroclor matrix spike and matrix spike duplicate recoveries is outside criteria. Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1260 B4JK1MSD
Aroclor-1016 B4JK1MSD

Matrix Spikes AROCLOR

AMS4 The following Aroclor matrix/matrix spike duplicate samples have percent recoveries that are greater than the upper acceptance limit Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1260 B4JK1MS, B4JK1MSD
Aroclor-1016 B4JK1MSD

4. **BLANK CONTAMINATION:**

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects, "U".
The following analytes in the sample shown were qualified with "U" for these reasons:

A) **Method blank contamination:**

No problems found for this qualification

B) **Field or rinse blank contamination:**

No problems found for this qualification. There is no associated field blank with these samples.

5. **CALIBRATION:**

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

For the PCB fraction, if %RSD exceeds 20% for any analytes except for the two surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".
The following analytes in the sample shown were qualified for %RSD.

No problems found.

B) The following Aroclor samples are associated with a closing CCV in which the % D of calibration factors exceeded 50%. Hits are qualified "J" and non-detects are qualified "UJ".

No problems found.

6. **COMPOUND IDENTIFICATION:**

A) **PCB Fraction:**

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

The following pesticide samples have percent difference (%D) between

Columns, which exceeds primary criteria. Hits are qualified "J".

Detection Limit AROCLOR

ADL312 The following aroclor samples have percent differences between analyte results in the range of 26-70%. Detected compounds are qualified J. Nondetected compounds are not qualified.

B4JK1MS, B4JK3DL, B4JK4, B4JK4DL, B4JK5, B4JK5DL, B4JK6, B4JK6DL, B4JK7, B4JK7DL, B4JK8DL

Aroclor-1254 B4JK3DL, B4JK4, B4JK4DL, B4JK5, B4JK5DL, B4JK6, B4JK6DL, B4JK7, B4JK7DL, B4JK8DL

Aroclor-1016 B4JK1MS

10. CONTRACT PROBLEMS NON-COMPLIANCE:

No problems found.

11. FIELD DOCUMENTATION: No problems found.

12. OTHER PROBLEMS: none

13. This package contains re-extractions, re-analyses or dilutions. Upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.

B4JK1DL, B4JK3DL, B4JK4DL, B4JK5DL, B4JK6DL, B4JK7DL, B4JK8DL

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 37088
LABORATORY: MITKEM

SDG No.: B4JC3
SITE: CORNELL-DUBLIER
ANALYSIS: 20(S) PCB

DATA ASSESSMENT

The current SOP HW-37 (Revision 1.2) August, 2007, USEPA Region II Data Validation SOP for Statement of Work SOM01.2 for evaluating organic data have been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material, "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's Signature: David Rosenberg

Date: February 19, 2008

Verified By:

Date: 2/28/2008

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.
The following action was taken in the samples and analytes shown due to excessive holding time.

The following Aroclor samples were extracted outside both Technical, and Contractual criteria. Hits are qualified "J", and non-detects are qualified "UJ".

No problems found.

2. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

No problems found for this qualification.

3. MATRIX SPIKE/SPIKE DUPLICATE, LCS (Lab Control Sample):

The LCS data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The LCS may be used in conjunction with other QC criteria for additional qualification of data.

Matrix Spikes AROCLOR

AMS4 The following Aroclor matrix/matrix spike duplicate samples have percent recoveries that are greater than the upper acceptance limit Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1260 B4JC3MS, B4JC3MSD

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field

activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects, "U".
The following analytes in the sample shown were qualified with "U" for these reasons:

A) Method blank contamination:

No problems found for this qualification

B) Field or rinse blank contamination:

No problems found for this qualification. There is no associated field blank with these samples.

5. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

For the PCB fraction, if %RSD exceeds 20% for any analytes except for the two surrogates (which must not exceed 30% RSD), qualify all associated positive results "J" and non-detects "UJ".
The following analytes in the sample shown were qualified for %RSD.

No problems found.

B) The following Aroclor samples are associated with a closing CCV in which the % D of calibration factors exceeded 50%. Hits are qualified "J" and non-detects are qualified "UJ".

No problems found.

6. COMPOUND IDENTIFICATION:

A) PCB Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

The following pesticide samples have percent difference (%D) between Columns, which exceeds primary criteria. Hits are qualified "J".

Detection Limit	AROCLOR

ADL312 The following aroclor samples have percent differences between analyte results in the range of 26-70%. Detected compounds are qualified J. Nondetected compounds are not qualified.

B4JC3MS, B4JC3MSD, B4JD7DL, B4JD9, B4JE4, B4JE6, B4JE7, B4JF0
Aroclor-1260 B4JC3MSD
Aroclor-1254 B4JC3MS, B4JC3MSD, B4JD7DL, B4JD9, B4JE4, B4JE6, B4JE7, B4JF0

If hits are below the CRQL and %D is greater than 50% values are elevated to the CRQL and qualified "U".

10. CONTRACT PROBLEMS NON-COMPLIANCE:

No problems found.

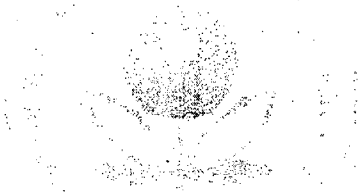
11. FIELD DOCUMENTATION: No problems found.

12. OTHER PROBLEMS: none

13. This package contains reextractions, reanalyses or dilutions. Upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.

B4JD3DL , B4JD4DL, B4JD5DL, B4JD6DL, B4JD7DL, B4JD8DL, B4JD9DL, B4JE0DL, B4JE1DL, B4JE2DL, B4JE3DL, B4JE6DL, B4JE7DL, B4JE8DL, B4JE9DL, B4JF0DL, B4JF1DL, B4JF2DL

SOP NO. HW-37/Aroclor
Validation of Data
USEPA Contract Laboratory Program
Statement of Work for Organic Analysis of Low/Medium Concentration of Aroclor Organic Compounds SOM01.1



Prepared by: George Kabras — Date: 12/05/06
George Kabras, Chemist
Hazardous Waste Support Section

Peer Reviewed by: Russell Arnone — Date: 12/05-1/06
Russell Arnone, Chemist
Hazardous Waste Support Section

Concurred by: Linda Mauel — Date: 12/5/06
Linda Mauel, Chief
Hazardous Waste Support Section

Approved by: Robert Runyon — Date: 12/11/06
Robert Runyon, Chief
Hazardous Waste Support Branch

Annual Review

Reviewed by: _____ Date: _____
Name

Reviewed by: _____ Date: _____
Name

TABLE OF CONTENTS

INTRODUCTION

Scope and Applicability

This SOP offers detailed guidance in evaluating laboratory data generated according to the method in the "USEPA Contract Laboratory Program Statement of Work for Organics Analysis Multi-Media, Multi-Concentration, SOM01.1, May 2005". The validation procedures and actions discussed in this document are based on the requirements set forth in the "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, January 2005". This document attempts to cover technical problems specific to low/Medium concentration of Aroclor compounds. Situations may arise where data limitations must be assessed based on the reviewer's own professional judgement.

In addition to technical requirements, contractual requirements may also be covered in this document. While it is important that instances of contract non-compliance be addressed in the Data Assessment, the technical criteria are always used to qualify the analytical data.

Summary

To ensure a thorough evaluation of each result in a data case, the reviewer must complete the checklist within this SOP, answering specific questions while performing the prescribed "ACTIONS" in each section. Qualifiers (or flags) are applied to questionable or unusable results as instructed. The data qualifiers discussed in this document are as follows:

Data Qualifiers

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate

concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Lab Qualifiers:

D - The positive value is the result of an analysis at a secondary dilution factor.

B - The analyte is present in the associated method blank as well as in the sample. This qualifier has a different meaning when validating inorganic data.

E - The concentration of this analyte exceeds the calibration range of the instrument.

P - Pesticide/Aroclor target analytes when the % Difference between the analyte concentrations obtained from the two dissimilar GC columns is greater than 25%.

The reviewer must prepare a detailed data assessment to be submitted along with the completed SOP checklist. The Data Assessment must list all data qualifications, reasons for qualifications, instances of missing data and contract non-compliance.

Reviewer Qualifications:

Data reviewers must possess a working knowledge of the USEPA Statement of Work SOM01.1 and National Functional Guidelines mentioned above.

YES NO N/A

PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER: 37088 LAB: Mitchem

SITE NAME: Cornell Dubilier SDG No(s).: B4QE0

1.0 Chain of Custody and Sampling Trip Reports

1.1 Are the Traffic Reports/Chain-of-Custody Records present for all samples? ☑ ___ ___

ACTION: If no, contact RSCC, or the TOPO to obtain replacement of missing or illegible copies from the lab.

1.2 Is the Sampling Trip Report present for all samples? ☑ ___ ___

ACTION: If no, contact either RSCC or ask the TOPO to obtain the necessary information from the prime contractor.

2.0 Data Completeness and Deliverables

2.1 Have any missing deliverables been received and added to the data package? ___ [ ] ✓

ACTION: Contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the lab. If lab cannot provide them, note the effect on the review of the data package in the Contract Problems/Non-compliance section of the Data Assessment.

2.2 Was SMO/CLASS CCS checklist included with the package? [ ] ___ ✓

	YES	NO	N/A
2.3 Are there any discrepancies between the Traffic Reports/Chain-of-Custody Records, and Sampling Trip Report?		☑	

ACTION: If yes, contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the laboratory.

3.0 Cover Letter SDG Narrative

3.1 Is the SDG Narrative or Cover Letter Present?	☑		
3.2 Are case number, SDG number and contract number contained in the SDG Narrative or cover letter (see SOW, Exhibit B, section 2.5.1)? EPA sample numbers in the SDG, detailed documentation of any quality control, sample, shipment, and/or analytical problems encountered in processing the samples? Corrective action taken?	☑		
3.3 Does the Narrative contain the following information SOM01.1, page B-12, section 2.5.1)? column used, storage of samples, case#, SDG#, analytical problems, and discrepancies between field and lab weights.	☑		
3.5 Did the contractor record the temperature of the cooler on the Form DC-1, Item 9 - Cooler Temperature, and in the SDG Narrative?	☑		
3.6 Does the Case Narrative contain the "verbatim" statement (page B-12, section 2.5.1 of the SOM)?	☑		

ACTION: If "No", to any question in this section, contact the TOPO to obtain necessary resubmittals. If unavailable, document under the Contract Problems/ Non-Compliance section of the Data Assessment.

	YES	NO	N/A

4.0 Data Validation Checklist

4.1 Check the package for the following (see SOM reporting requirements, section 2.1, page B-10):

a. Is the package paginated in ascending order starting from the SDG narrative?	☑		
b. Are all forms and copies legible?	☑		
c. Assembled in the order set forth in the SOW?	☑		
d. All Aroclor Data present?	☑		

PART A: Low/Medium Aroclor Analyses

1.0 Sample Conditions/Problems

1.1 Do the Traffic Reports/Chain-of-Custody Records, Sampling Trip Report or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		☑	

ACTION: If samples were not iced or the ice was melted upon arrival at the laboratory and the temperature of the cooler was > 10° C, then flag all positive results with a "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any Aroclor technical holding times, determined from date of collection to date of analysis, been exceeded?		☑	

2.2 Preservation: Aqueous and Non-aqueous samples must be cooled at 4°C ± 2°C.

YES NO N/A

ACTION: Qualify sample results according to the following table.

Holding Time Actions for Low/Medium Aroclor Analyses

Matrix	Preserved	Criteria	Action	
			Detected Associated Compounds	Non-Detected Associated Compounds
Aqueous	No	≤ 7 days (extraction) < 40 days (analysis)	J*	UJ*
	No	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 7 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R
Non-aqueous	No	≤ 14 days (extraction) ≤ 40 days (analysis)	J*	UJ*
	No	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 14 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R

* Only if cooler temperature exceeds 10°C (see ACTION in Section 1.1 above). No action required if temperature ≤ 10°C.

3.0 Surrogate Recovery (Form II ARO-1, Form II ARO-2, Form VIII ARO)

3.1 Are the Aroclor Recovery Summary Forms present? [ ] ___ ___

ACTION: Contact the TOPO to obtain an explanation/resubmittal from the lab. If missing deliverables are unavailable, document the effect in the Data Assessment.

	YES	NO	N/A
3.2 Were the two surrogates, tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) added to all samples, MS/MSD, LCS, blanks including standards?	[✓]	___	___
ACTION: If no, use professional judgment in qualifying data as missing surrogate analyte may not directly apply to target analytes.			
3.3 Were outliers marked with an asterisk on Form II?	[ ]	___	✓
ACTION: Circle all outliers with a red pencil.			
If yes, were effected samples re-analyzed?	[ ]	___	✓
3.4 The RTs of the surrogates in each mid-point Aroclor standards used for continuing calibration verification, all samples, including MS/MSD, LCS and all blanks must be within the calculated RT window. TCX must be within ± 0.05 minutes and DCB must be within ± 0.10 minutes of the mean retention time (RT) determined from the initial calibration and tabulated in Form VIII Pest.			
Were any outliers marked with an asterisk on Form VIII ARO?	___	[ ]	✓
ACTION: Circle all outliers with a red pencil. If any Surrogate is outside the required limits, qualify their associated target compounds (See Table below) as follows:			

Surrogate Compound Recovery Action for Pesticides

Criteria	Action	
	Detected Target Compounds	Non-Detected Target Compounds
%R > 200%	J	No qualification
150% < %R ≤ 200%	J	No qualification
30% ≤ %R ≤ 150%	No qualification	
10% ≤ %R < 30%	J	UJ
%R < 10% (sample dilution not a factor)	J	R
%R < 10% (sample dilution is a factor)	Use professional judgment	
RT out of RT window	Use professional judgment	
RT within RT window	No qualification	

YES NO N/A

Note: Blank analysis having surrogates out of specification:

The reviewer must give special consideration to the validity of associated samples. Basic concern is whether the blank problems represent an isolated problem with the blank alone or whether there is a fundamental problem with the analytical process. For example, if one or more samples in the batch show acceptable surrogate recoveries, the reviewer may choose to consider the blank problem to be an isolated occurrence.

ACTION: Note in the Data Assessment under Contract Problems/ Non-Compliance if the Lab did not perform reanalysis and reviewer's judgment regarding blank problem.

3.5 Are there any transcription/calculation errors between raw data and Form IIs? ___ ☑ ___

ACTION: If large errors exist, ask the TOPO to obtain an explanation/resubmittal from the lab, make any necessary corrections and note errors in the data assessment.

4.0 Matrix Spike/Matrix Spike Duplicate Recovery (Form III)

Note: Data for MS/MSD will not be present unless requested.

4.1 Are the MS/MSD Recovery Forms (Form III ARO) present? ☑ ___ ___

4.2 Was the MS/MSD analyzed at the required frequency (once per SDG, or every 20 samples, whichever is more frequent)? ☑ ___ ___

ACTION: If any MS/MSD data are missing, take action as specified in section 3.1 above.

ACTION: No action is taken on MS/MSD data alone. However, using professional judgement, the validator may use the MS and MSD results in conjunction with other QC criteria and determine the need for some qualification of the data. If Any MS/MSD % recovery or RPD is out of specification, qualify data to include the consideration of the existence of interference in the raw data. Consideration include, but not limited to the following "Action":

Matrix Spike/Matrix Spike Duplicate Action for Aroclor

Criteria	Action	
	Detected Spike Compounds	Non-detected Spike Compounds
%R or RPD > Upper Acceptance Limit	J	No qualification
20% ≤ %R < Lower Acceptance Limit	J	UJ

YES NO N/A

%R < 20%	Use professional judgment
Lower Acceptance Limit ≤ %R; RPD ≤ Upper Acceptance Limit	No qualification

Note: If it can be determined that the results of the MS/MSD affects only the sample spiked, limit qualification to only this sample. However, use professional judgment when it is determined through the MS/MSD results that the laboratory is having systematic problem in the analysis of one or more analytes that affect all associated samples.

5.0 Blanks (Form IV)

5.1 Is the Aroclor Method Blank Summary (Form IV ARO) present for aqueous and soil samples? ☑ ___ ___

5.2 Frequency of Analysis: For the analysis of AROCLOR, has a method blank been analyzed for each SDG or every 20 samples, whichever is more frequent? ☑ ___ ___

ACTION: If any blank data are missing, take action as specified above in section 3.1. If blank data is not available, reject "R" all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

5.3 A separate Form IV should be present if part of an extraction batch required sulfur removal. In such cases some samples will be listed on two blank summary forms - once under the method blank, and once under the sulfur clean-up blank (PCBLK). Was this additional blank raw data and Form IV submitted when required? ☐ ___ ☑

ACTION: If Form IV sulfur clean-up blank is missing, take action as specified in section 3.1 above.

5.4 Has a Aroclor instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence (minimum contract requirement)? ☑ ___ ___

ACTION: If any blank data are missing, take action specified in Section 3.1.

5.5 Was the correct identification scheme used for all Aroclor blanks? (See page B-39, section 3.3.7.3 of SOM01.1 for further information) ☑ ___ ___

ACTION: Contact the TOPO to obtain resubmittals or make the required corrections on the forms.

YES NO N/A

Document in the Data Assessment under Contract Problems/Non-Compliance all corrections made by the validator.

5.6 Chromatography: Review the blank raw data chromatogram, quant. Reports and data system printout. Is the chromatographic performance (baseline stability) acceptable for each instrument? ☑ ___ ___

ACTION: Use professional judgement to determine the effect on the data.

5.7 Are all detected hits for target compounds in method, and field blanks less than the CRQL? ☑ ___ ___

ACTION: IF no, an explanation and laboratory's corrective actions must be addressed in the case SDG narrative. Contact TOPO to request from Lab. revised narrative and make a note in the Contract Problems/Non-Compliance section of the Data Assessment.

6.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/reagent or cleanup blanks contain positive hits for target Aroclor compounds with values greater than the CRQL for that analyte? ___ ☑ ___

Note: The concentration of each target compound in the instrument blank must be less than the CRQL for that analyte.

ACTION: Make note in data assessment under Contract Problems/Non-Compliance if any blank contains hit above the CRQLs.

6.2 Do any instrument blanks contain positive Aroclor results with values greater than CRQLs? ___ ☑ ___

ACTION: Take the action specified in section 6.1.

6.3 Do any field/rinse blanks have positive Aroclor results? ___ [ ] ☑

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for system monitoring compound, instrument performance criteria, spectral or calibration QC problems.

ACTION: Follow the directions in the table below to qualify results due to contamination. Use the largest value from all the associated

YES NO N/A

blanks. If any blanks are grossly contaminated, all associated sample data should be qualified unusable (R).

Blank Action for Aroclor Analyses

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field, Sulfur Cleanup, Instrument	Detects	Not detected	No qualification required
	< CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	= CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	> CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL and < blank contamination	Report concentration of sample with a U
		≥ CRQL and ≥ blank contamination	No qualification required
	Gross contamination	Detects	Qualify results as unusable R

NOTE: Analytes qualified "U" for blank contamination are treated as "hits" when qualifying for calibration criteria.
Note: When applied as described in the table above, the contaminant concentration in the blank are multiplied by the sample dilution factor.

6.4 Are there field/rinse/equipment blanks associated with every sample? [ ] ___ ✓

ACTION: Note in data assessment if there's no associated field/rinse/equipment blank.

Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Aroclor Initial and Continuing Calibration

7.1 Are the following Forms, chromatograms and data system printouts present?

a.) Form VI ARO-1/Aroclor Initial Calibration (Multipoint) ✓ ___ ___

	YES	NO	N/A
b.) Form VI ARO-2/Aroclor Initial Calibration (Multipoint)	☑	___	___
c.) Form VI ARO-3/Aroclor Initial Calibration(Singlepoint)	☑	___	___
d.) Form VII ARO/Aroclor Calibration Verification	☑	___	___
e.) Form VIII ARO/Aroclor Analytical Sequence	☑	___	___
f.) Form X ARO/Identification Summary for Multicomponent Analysis	☑	___	___

7.2 Initial Calibration

7.2.1 Was the following contract required initial calibration sequence provided by the laboratory? ☑ YES ___ NO ___ N/A

Initial Calibration Sequence	
1.	Aroclor 1221 CS3
2.	Aroclor 1232 CS3
3.	Aroclor 1242 CS3
4.	Aroclor 1248 CS3
5.	Aroclor 1254 CS3
6.	Aroclor 1262 CS3
7.	Aroclor 1268 CS3
8.	Aroclor1016/1260 (100 ng/ml) CS1
9.	Aroclor1016/1260 (200 ng/ml) CS1
10.	Aroclor1016/1260 (400 ng/ml) CS1
11.	Aroclor1016/1260 (800 ng/ml) CS1
12.	Aroclor1016/1260 (1600 ng/ml) CS1
13.	Instrument Blank

ACTION: If initial calibration is not performed or not performed in the proper sequence, notify the TOPO and make a note in the data assessment.

7.3 Are there any transcription/calculation errors between raw data and the Forms? ___ YES ☑ NO ___ N/A

ACTION: If large errors exist, take action specified in section 3.1 above.

YES NO N/A

7.4 Mean Retention Time (RT) and RT Window

Were the following mean RT and RT window met: ☑ ___ ___

a.) The mean RT of each of the three to five major peaks were determined from the five-point initial calibration for all Aroclors

b.) RT window was calculated as ± 0.07 for each of the three to five major peaks and ± 0.05 and ± 0.10 for the surrogates tetrachloro-m-xylene and decachlorobiphenyl, respectively.

ACTION: If no, follow the action as specified in section 3.1.

7.5 Was at least one chromatogram from each of the Aroclor standards yield peaks that give deflection between 50-100% of full scale? ☑ ___ ___

ACTION: IF no, take action as specified in section 3.1.

7.6 Was the mean Calibration Factor (CF) calculated for the three to five major peaks of each Aroclor, as well as for the surrogates, over the initial calibration range? [ ] ☑ ___

7.7 Were the Percent Relative Standard Deviation (%RSD) of the Calibration Factor for the three to five major peaks < 20% of each of the Aroclor compounds and surrogates? ☑ ___ ___

ACTION: If no, take action as specified in the following Table.

Initial Calibration Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
Initial calibration is not performed or not performed in proper sequence	Use Professional Judgment and notify Contract Lab Program (CLP) Project Officer	
%RSD exceeds allowable limits *	J	UJ
%RSD within allowable limits *	No qualification	

* %RSD < 20.0% for Aroclors and surrogates (tetrachloro-m-xylene and decachlorobiphenyl.

7.8 Continuing Calibration Verification (CCV) (Form VII)

Were the Absolute Retention Time (RT) for each Aroclor and surrogate in the mid-point concentration (CS3) of

YES NO N/A

the Standard used for CCV must be within the RT window determined from the initial calibration?

7.9 For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, the Percent Difference (%D) between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±15.0%.

7.10 For a closing CCV, the %D between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±50.0%.

7.11 No more than 14 hours may elapse from the injection of the instrument Blank that begins an analytical sequence (opening CCV) and the injection of the last mid-point concentration (CS3) of the Aroclor standards that ends an analytical sequence (closing CCV).

7.12 No more than 12 hours may elapse from the injection of the instrument blank that begins an analytical sequence (opening CCV and the injection of the last sample or blank that is part of the same analytical sequence.

Were sections 7.8 to 7.12 met? ☑ ___ ___

ACTION: If no, use the following table to qualify Aroclor data:

Continuing Calibration Verification (CCV) Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
RT out of RT Window	Use professional Judgment *	
Percent Difference not within limits ± 15% as specified in section 7.9 above	J	UJ
Percent Difference not within limits ± 50% as specified in section 7.10 above	J	UJ
Time elapsed is greater than acceptable limits as specified in section 7.11 & 7.12 above	R	
Percent Difference, time elapsed and RT are within acceptable limits	No qualification	

YES NO N/A

* For non-detected target compounds in the affected samples, check to see if the sample chromatogram contain any peak that are close to the expected RT window of the Aroclor of interest.

If no peaks are present, consider the non-detected values to be valid and no qualification of the data is necessary.

If any peaks are present close to the expected RT window of the Aroclor of interest, qualify the non-detected values as presumptively present "N".

For detected compounds in the affected samples, if the peaks are within the RT window, no qualification of the data is necessary. If the peaks are close to the expected RT window of the Aroclors of interest, the reviewer may take additional effort to determine if sample peaks represent the compound of interest.

For example, the reviewer can examine the data package for the presence of three or more standards containing the Aroclor of interest that were run within the analytical sequence during which the sample was analyzed. If three or more such standards are present, the RT window can be re-evaluated using the mean RT of the standards.

If the peaks in the affected sample fall within the revised window, qualify the detected Aroclor as "JN".

If the reviewer cannot do anything with the data to resolve the problem of concern, qualify all non-detects as unuseable "R".

8.0 Analytical Sequence Check (Form VIII-ARO)

8.1 Is Form VIII-Pest present and complete for each column and each period of analyses? ✓ ___ ___

ACTION: If no, take action as specified in section 3.1

8.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses, and all standards analyzed at the required frequency for each GC/ECD instrument used? ✓ ___ ___

ACTION: If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Generally, the effect is negligible unless the sequence was grossly altered and/or the calibration was out of QC limits.

8.3 Are the surrogate retention time (RT) from the initial calibration for TCX and DCB provided on Form VIII-Pest? ✓ ___ ___

YES NO N/A

ACTION: If no, take action as specified in section 3.1

8.4 Was the asterisk (*) applied to the RT of any blanks, samples, standards, MS/MSD, and LCS that did not meet the QC Limits of ± 0.05 minutes for TCX (tetrachloro-m-xylene) and ± 0.10 minutes for DCB (decachlorobiphenyl)? [ ] ___ ✓

ACTION: If any data are missing, take action specified in 3.1 above.

If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Document in the data assessment under Contract Problems/Non-Compliance.

9.0 Sulfuric Acid and Gel Permeation Chromatography (GPC) Cleanup Procedures

9.1 Was sulfuric acid added to all extracts? ✓ ___ ___

Note: Sulfuric acid cleanup is mandatory for all extracts

ACTION: If no, take action specified in section 3.1

9.2 Gel Permeation Chromatography (GPC

GPC is an optional cleanup procedure for both aqueous and non-aqueous samples that contain high molecular weight compounds that interfere with Aroclor analysis.

9.3 If GPC cleanup was performed on samples, GPC calibration is acceptable if the two UV traces meet the following requirements.

a. Peaks must be observed and should be symmetrical for all compounds in the calibration solution.

b. Corn oil and phthalate peaks should exhibit greater than 85% resolution.

c. The phthalate and Methoxychlor peaks should exhibit greater than 85% resolution.

d. Methoxychlor and perylene peaks should exhibit greater than 85% resolution.

e. Perylene and sulfur peaks must be saturated and should exhibit greater than 90% baseline resolution.

YES NO N/A

f. The RT shift is less than 5% between UV traces for bis(2-ethylhexylphthalate and perylene.

9.4 Were all above criteria met? ✓ ___ ___

ACTION: If no, examine the raw data for the presence of high molecular weight contaminants. Examine the subsequent sample data for unusual peaks and use professional judgment in qualifying the data.

10.0 Laboratory Control Samples (LCSs)

10.1 LCSs provide information on the accuracy of the analytical method and laboratory performance.

Aroclor Laboratory Control Sample Recovery - Aqueous and Non-Aqueous

Compound	% Recovery QC Limits
Aroclor 1016	50 - 150
Aroclor 1260	50 - 150
Tetrachloro-m-xylene (surrogate)	30 - 150
Decachlorobiphenyl (surrogate)	30 - 150

10.2 Were the above recoveries met? ✓ ___ ___

ACTION: If no, qualify the sample data as follows:

Criteria	ACTION	
	Detected Associated Compound	Non-Detected Associated Compound
%R> Upper Acceptance Limit	J	No qualification
%R< Lower Acceptance Limit	J	R
Lower Acceptance Limit < %R < Upper Acceptance Limit	No qualification	

YES NO N/A

11.0 Aroclor Identification (Form X ARO/Identification Summary for Multicomponent Analysis

11.1 Is Form X (ARO) complete for every sample in which Aroclor was detected? ☑ ___ ___

ACTION: Take action as specified in section 3.1 above.

11.2 The identification of a Multi component Aroclor by GC method is based primarily on RT data and pattern recognition. Were the following requirements met: ☑ ___ ___

a.) A Minimum of 3 major peaks were selected for each Aroclor. If more than one Aroclor is observed in a sample, a peak common to other Aroclor(s) must not be used to quantitate other Aroclor. Lab must choose different peaks to quantitate each Aroclor.

b.) If a chromatogram is replotted electronically to meet these requirements, the scaling factor used must be displayed on the chromatogram, and both the initial chromatogram and the replotted chromatogram must be submitted in the data package.

c.) The Retention Time (RT) of both of the surrogates and reported target compounds must be within the calculated RT window of both columns.

d.) When no analytes are identified in the sample, the chromatograms of the sample extract must use the same scaling factor used for the low-point standard of the initial calibration associated with those samples.

e.) Chromatogram must display the largest peak of any Aroclor detected in the sample at less than full scale.

f.) If an extract must be diluted, chromatograms must display Aroclor peaks between 25-100% of full scale.

ACTION: If retention times (RT) or peak apex cannot be verified, contact TOPO to obtain rescaled chromatograms from the lab.

If data reviewer identifies a peak in both GC columns that fall within the appropriate RT windows,

YES NO N/A

but was reported as non-detect, the compound may be false negative. If necessary, contact TOPO to instruct laboratory to re-evaluate the chromatograms.

11.3 Are there any transcription/calculation errors in Form I and Form X ARO? ___ ☑ ___

ACTION: Take action as specified in section 3.1 above.

11.4 Are the RTs of Aroclor peaks within the established RT window for analyses on both columns? ☑ ___ ___

11.5 Was the GC/MS confirmation provided for Aroclor concentration > 10 ug/ml in final extract? ☑ ___ ___

NOTE: Laboratory is required to contact SMO to determine if GC/MS confirmation is required. Check the semivolatile TIC data for presence of Aroclors.

11.6 Is the per cent difference (%D) calculated for positive results on both columns < 25%? ☑ ___ ___

ACTION: The reviewer must check columns for peak interferences for the positive hits. Qualify the Aroclor(s) according to following Table:

Action on Qualifying Positive Aroclor Results

Percent Differences	Qualifier
0 - 25%	None
26 - 70%	"J"
71 - 100%	"JN"
101 - 200% (No Peak Interferences)	"R"
101 - 200% (Interferences detected)*	"JN"
> 50% (Aroclor value < CRQL)**	"U"
> 200%	"R"

YES NO N/A

* When interferences is detected on either column, qualify the data as "JN"

** When the Aroclor value is below CRQL and %D > 50%, raise the value to CRQL and qualify "U", undetected.

12.0 Target Aroclor List (TCL)

12.1 Are the Aroclor Analysis Data Sheets (Form I ARO) present with required header information on each page for samples, MS/MSD (if required), method and instrument blanks (per. column & analysis)? ☑ ___ ___

12.2 Is the chromatographic performance acceptable with respect to baseline stability, full-scale attenuation, peak shape/resolution? ☑ ___ ___

ACTION: If no, take action specified in section 3.1 above.

13.0 Compound Quantitation and Reported Detection Limits

13.1 Are there any transcription/calculation errors in the Form I results? Check at least two positive results. Were any errors found? [ ] ✓ ___

ACTION: If errors were found, take action as specified in section 3.1 above.

13.2 Are the contract required quantitation limits (CRQL) adjusted to reflect sample dilution? [ ] ___ ✓

ACTION: If errors exist, take action as specified in section 3.1 above.

ACTION: When a sample is required to be diluted, the lowest CRQL is used (unless a QC exceedance dictates the use of the higher CRQL from the diluted sample). Replace concentration which exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with the result from the diluted sample. Specify which Form I to use. Use a red pencil and draw a red "X" across the entire page of all Form I's that should not be used, including those in the data summary package.

At the top or bottom of the Forms, write with red pencil, "DO Not Use".

YES NO N/A

Note: If the sample dilution factor (DF) is greater than 10, an additional 10 times more concentrated than the diluted sample extract must be analyzed and reported with the sample data. If the DF is less or equal to 10, but greater than 1, the results of the original undiluted analysis must also be reported (see SOM01.1/section 10.3.3.4/page D-44/ARO).

ACTION: IF the above requirement was not met, contact the TOPO to obtain an explanation/resubmittal from the lab and make a note in the Data Assessment under Contract Problems/Non-Compliance section.

13.3 For non-aqueous samples, were the percent moisture < 70%? [ ] ___ ✓

Action: If the % moisture ≥ 70.0% and < 90.0%, qualify detects as "J" and non-detects as approximated "UJ" If the % Moisture ≥ 90%, qualify detects as "J" and non-detects as "R"

14.0 Field Duplicates

14.1 Were any field duplicates submitted for Aroclor analysis? [ ] ___ ✓

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. If large differences exist, contact the TOPO to confirm identification of field duplicates with the sampler.

YES NO N/A

Definitions

ARO - Aroclor
CCS - contract compliance screening
CF - Calibration Factor
CLASS - Contract Laboratory Analytical Services Support
CLP - Contract Laboratory Program
CRQL - Contract Required Quantitation Limit
GC/ECD - Gas Chromatography/Electron Capture Detector
kg - kilogram
µg - microgram
ℓ - liter
mℓ - milliliter
QC - quality control
RAS - Routine Analytical Services
RPD - Relative Percent Difference
RRF - Relative Response Factor
$\overline{RRF}$ - Average Relative Response Factor (from initial calibration)
RRT - Relative Retention Time
RSD - Relative Standard Deviation
RT - Retention Time
RSCC - Regional Sample Control Center
SDG - Sample Delivery Group
SOP - standard operating procedure
SOW - Statement of Work
TCL - Target Compound List
TCLP - Toxicity Characteristics Leachate Procedure
TIC - Tentatively Identified Compound
TPO - Technical Project Officer
VTSR - Validated Time of Sample Receipt
TOPO - Task Order Project Officer

YES NO N/A

References

1. USEPA Contract Laboratory Program of Work for Organic Analysis Multi-Media, Multi-Concentration, SOW/CLP/SOM01.1, October 2004
2. National Functional Guidelines for Superfund Organic Methods Data Review January 2005

SOP NO. HW-37/Aroclor
Validation of Data
USEPA Contract Laboratory Program
Statement of Work for Organic Analysis of Low/Medium Concentration of Aroclor Organic Compounds SOM01.1

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Peer Reviewed by: Russell Arnone Date: 12/05/06
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Linda Mauel, Chief
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Approved by: Robert Runyon Date: 12/11/06
Robert Runyon, Chief
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Annual Review

Reviewed by: _____ Date: _____
Name

Reviewed by: _____ Date: _____
Name

TABLE OF CONTENTS

INTRODUCTION

Scope and Applicability

This SOP offers detailed guidance in evaluating laboratory data generated according to the method in the "USEPA Contract Laboratory Program Statement of Work for Organics Analysis Multi-Media, Multi-Concentration, SOM01.1, May 2005". The validation procedures and actions discussed in this document are based on the requirements set forth in the "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, January 2005". This document attempts to cover technical problems specific to low/Medium concentration of Aroclor compounds. Situations may arise where data limitations must be assessed based on the reviewer's own professional judgement.

In addition to technical requirements, contractual requirements may also be covered in this document. While it is important that instances of contract non-compliance be addressed in the Data Assessment, the technical criteria are always used to qualify the analytical data.

Summary

To ensure a thorough evaluation of each result in a data case, the reviewer must complete the checklist within this SOP, answering specific questions while performing the prescribed "ACTIONS" in each section. Qualifiers (or flags) are applied to questionable or unusable results as instructed. The data qualifiers discussed in this document are as follows:

Data Qualifiers

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate

concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Lab Qualifiers:

D - The positive value is the result of an analysis at a secondary dilution factor.

B - The analyte is present in the associated method blank as well as in the sample. This qualifier has a different meaning when validating inorganic data.

E - The concentration of this analyte exceeds the calibration range of the instrument.

P - Pesticide/Aroclor target analytes when the % Difference between the analyte concentrations obtained from the two dissimilar GC columns is greater than 25%.

The reviewer must prepare a detailed data assessment to be submitted along with the completed SOP checklist. The Data Assessment must list all data qualifications, reasons for qualifications, instances of missing data and contract non-compliance.

Reviewer Qualifications:

Data reviewers must possess a working knowledge of the USEPA Statement of Work SOM01.1 and National Functional Guidelines mentioned above.

YES NO N/A

PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER: 37088 LAB: Mitkem

SITE NAME: Cornell Dubilier SDG No(s).: BYJB1

1.0 Chain of Custody and Sampling Trip Reports

1.1 Are the Traffic Reports/Chain-of-Custody Records present for all samples? ☑ ___ ___

ACTION: If no, contact RSCC, or the TOPO to obtain replacement of missing or illegible copies from the lab.

1.2 Is the Sampling Trip Report present for all samples? ☑ ___ ___

ACTION: If no, contact either RSCC or ask the TOPO to obtain the necessary information from the prime contractor.

2.0 Data Completeness and Deliverables

2.1 Have any missing deliverables been received and added to the data package? ___ [ ] ✓

ACTION: Contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the lab. If lab cannot provide them, note the effect on the review of the data package in the Contract Problems/Non-compliance section of the Data Assessment.

2.2 Was SMO/CLASS CCS checklist included with the package? ☑ ___ ___

	YES	NO	N/A
2.3 Are there any discrepancies between the Traffic Reports/Chain-of-Custody Records, and Sampling Trip Report?		☑	

ACTION: If yes, contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the laboratory.

3.0 Cover Letter SDG Narrative

	YES	NO	N/A
3.1 Is the SDG Narrative or Cover Letter Present?	☑		
3.2 Are case number, SDG number and contract number contained in the SDG Narrative or cover letter (see SOW, Exhibit B, section 2.5.1)? EPA sample numbers in the SDG, detailed documentation of any quality control, sample, shipment, and/or analytical problems encountered in processing the samples? Corrective action taken?	☑		
3.3 Does the Narrative contain the following information SOM01.1, page B-12, section 2.5.1)? column used, storage of samples, case#, SDG#, analytical problems, and discrepancies between field and lab weights.	☑		
3.5 Did the contractor record the temperature of the cooler on the Form DC-1, Item 9 - Cooler Temperature, and in the SDG Narrative?	☑		
3.6 Does the Case Narrative contain the "verbatim" statement (page B-12, section 2.5.1 of the SOM)?	☑		

ACTION: If "No", to any question in this section, contact the TOPO to obtain necessary resubmittals. If unavailable, document under the Contract Problems/ Non-Compliance section of the Data Assessment.

YES NO N/A

4.0 Data Validation Checklist

4.1 Check the package for the following (see SOM reporting requirements, section 2.1, page B-10):

a. Is the package paginated in ascending order starting from the SDG narrative? ☑ ___ ___

b. Are all forms and copies legible? ☑ ___ ___

c. Assembled in the order set forth in the SOW? ☑ ___ ___

d. All Aroclor Data present? ☑ ___

PART A: Low/Medium Aroclor Analyses

1.0 Sample Conditions/Problems

1.1 Do the Traffic Reports/Chain-of-Custody Records, Sampling Trip Report or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ___ ☑ ___

ACTION: If samples were not iced or the ice was melted upon arrival at the laboratory and the temperature of the cooler was > 10° C, then flag all positive results with a "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any Aroclor technical holding times, determined from date of collection to date of analysis, been exceeded? ___ ☑ ___

2.2 Preservation: Aqueous and Non-aqueous samples must be cooled at 4°C ± 2°C.

YES NO N/A

ACTION: Qualify sample results according to the following table.

Holding Time Actions for Low/Medium Aroclor Analyses

Matrix	Preserved	Criteria	Action	
			Detected Associated Compounds	Non-Detected Associated Compounds
Aqueous	No	≤ 7 days (extraction) < 40 days (analysis)	J*	UJ*
	No	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 7 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R
Non-aqueous	No	≤ 14 days (extraction) ≤ 40 days (analysis)	J*	UJ*
	No	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 14 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R

* Only if cooler temperature exceeds 10°C (see ACTION in Section 1.1 above). No action required if temperature ≤ 10°C.

3.0 Surrogate Recovery (Form II ARO-1, Form II ARO-2, Form VIII ARO)

3.1 Are the Aroclor Recovery Summary Forms present? [✓] ___ ___

ACTION: Contact the TOPO to obtain an explanation/resubmittal from the lab. If missing deliverables are unavailable, document the effect in the Data Assessment.

	YES	NO	N/A
3.2 Were the two surrogates, tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) added to all samples, MS/MSD, LCS, blanks including standards?	☑		

ACTION: If no, use professional judgment in qualifying data as missing surrogate analyte may not directly apply to target analytes.

3.3 Were outliers marked with an asterisk on Form II?	☑		
ACTION: Circle all outliers with a red pencil. If yes, were effected samples re-analyzed?	☑		
3.4 The RTs of the surrogates in each mid-point Aroclor standards used for continuing calibration verification, all samples, including MS/MSD, LCS and all blanks must be within the calculated RT window. TCX must be within ± 0.05 minutes and DCB must be within ± 0.10 minutes of the mean retention time (RT) determined from the initial calibration and tabulated in Form VIII Pest. Were any outliers marked with an asterisk on Form VIII ARO?		☐	☑

ACTION: Circle all outliers with a red pencil. If any Surrogate is outside the required limits, qualify their associated target compounds (See Table below) as follows:

Surrogate Compound Recovery Action for Pesticides

Criteria	Action	
	Detected Target Compounds	Non-Detected Target Compounds
%R > 200%	J	No qualification
150% < %R ≤ 200%	J	No qualification
30% ≤ %R ≤ 150%	No qualification	
10% ≤ %R < 30%	J	UJ
%R < 10% (sample dilution not a factor)	J	R
%R < 10% (sample dilution is a factor)	Use professional judgment	
RT out of RT window	Use professional judgment	
RT within RT window	No qualification	

YES NO N/A

Note: Blank analysis having surrogates out of specification:

The reviewer must give special consideration to the validity of associated samples. Basic concern is whether the blank problems represent an isolated problem with the blank alone or whether there is a fundamental problem with the analytical process. For example, if one or more samples in the batch show acceptable surrogate recoveries, the reviewer may choose to consider the blank problem to be an isolated occurrence.

ACTION: Note in the Data Assessment under Contract Problems/ Non-Compliance if the Lab did not perform reanalysis and reviewer's judgment regarding blank problem.

3.5 Are there any transcription/calculation errors between raw data and Form IIs? ___ ☑ ___

ACTION: If large errors exist, ask the TOPO to obtain an explanation/resubmittal from the lab, make any necessary corrections and note errors in the data assessment.

4.0 Matrix Spike/Matrix Spike Duplicate Recovery (Form III)

Note: Data for MS/MSD will not be present unless requested.

4.1 Are the MS/MSD Recovery Forms (Form III ARO) present? ☑ ___ ___

4.2 Was the MS/MSD analyzed at the required frequency (once per SDG, or every 20 samples, whichever is more frequent)? ☑ ___ ___

ACTION: If any MS/MSD data are missing, take action as specified in section 3.1 above.

ACTION: No action is taken on MS/MSD data alone. However, using professional judgement, the validator may use the MS and MSD results in conjunction with other QC criteria and determine the need for some qualification of the data. If Any MS/MSD % recovery or RPD is out of specification, qualify data to include the consideration of the existence of interference in the raw data. Consideration include, but not limited to the following "Action":

Matrix Spike/Matrix Spike Duplicate Action for Aroclor

Criteria	Action	
	Detected Spike Compounds	Non-detected Spike Compounds
%R or RPD > Upper Acceptance Limit	J	No qualification
20% ≤ %R < Lower Acceptance Limit	J	UJ

YES NO N/A

%R < 20%	Use professional judgment
Lower Acceptance Limit ≤ %R; RPD ≤ Upper Acceptance Limit	No qualification

Note: If it can be determined that the results of the MS/MSD affects only the sample spiked, limit qualification to only this sample. However, use professional judgment when it is determined through the MS/MSD results that the laboratory is having systematic problem in the analysis of one or more analytes that affect all associated samples.

5.0 Blanks (Form IV)

5.1 Is the Aroclor Method Blank Summary (Form IV ARO) present for aqueous and soil samples? ☑ ___ ___

5.2 Frequency of Analysis: For the analysis of AROCLOR, has a method blank been analyzed for each SDG or every 20 samples, whichever is more frequent? ☑ ___ ___

ACTION: If any blank data are missing, take action as specified above in section 3.1. If blank data is not available, reject "R" all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

5.3 A separate Form IV should be present if part of an extraction batch required sulfur removal. In such cases some samples will be listed on two blank summary forms - once under the method blank, and once under the sulfur clean-up blank (PCBLK). Was this additional blank raw data and Form IV submitted when required? [ ] ___ ☑

ACTION: If Form IV sulfur clean-up blank is missing, take action as specified in section 3.1 above.

5.4 Has a Aroclor instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence (minimum contract requirement)? ☑ ___ ___

ACTION: If any blank data are missing, take action specified in Section 3.1.

5.5 Was the correct identification scheme used for all Aroclor blanks? (See page B-39, section 3.3.7.3 of SOM01.1 for further information) ☑ ___ ___

ACTION: Contact the TOPO to obtain resubmittals or make the required corrections on the forms.

YES NO N/A

Document in the Data Assessment under Contract Problems/Non-Compliance all corrections made by the validator.

5.6 Chromatography: Review the blank raw data chromatogram, quant. Reports and data system printout. Is the chromatographic performance (baseline stability) acceptable for each instrument? [✓] ___ ___

ACTION: Use professional judgement to determine the effect on the data.

5.7 Are all detected hits for target compounds in method, and field blanks less than the CRQL? [✓] ___ ___

ACTION: IF no, an explanation and laboratory's corrective actions must be addressed in the case SDG narrative. Contact TOPO to request from Lab. revised narrative and make a note in the Contract Problems/Non-Compliance section of the Data Assessment.

6.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/reagent or cleanup blanks contain positive hits for target Aroclor compounds with values greater than the CRQL for that analyte? ___ [✓] ___

Note: The concentration of each target compound in the instrument blank must be less than the CRQL for that analyte.

ACTION: Make note in data assessment under Contract Problems/Non-Compliance if any blank contains hit above the CRQLs.

6.2 Do any instrument blanks contain positive Aroclor results with values greater than CRQLs? ___ [✓] ___

ACTION: Take the action specified in section 6.1.

6.3 Do any field/rinse blanks have positive Aroclor results? ___ [ ] [✓]

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for system monitoring compound, instrument performance criteria, spectral or calibration QC problems.

ACTION: Follow the directions in the table below to qualify results due to contamination. Use the largest value from all the associated

YES NO N/A

blanks. If any blanks are grossly contaminated, all associated sample data should be qualified unusable (R).

Blank Action for Aroclor Analyses

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field, Sulfur Cleanup, Instrument	Detects	Not detected	No qualification required
	< CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	= CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	> CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL and < blank contamination	Report concentration of sample with a U
		≥ CRQL and ≥ blank contamination	No qualification required
	Gross contamination	Detects	Qualify results as unusable R

NOTE: Analytes qualified "U" for blank contamination are treated as "hits" when qualifying for calibration criteria.
Note: When applied as described in the table above, the contaminant concentration in the blank are multiplied by the sample dilution factor.

6.4 Are there field/rinse/equipment blanks associated with every sample? [ ] ___ ✓

ACTION: Note in data assessment if there's no associated field/rinse/equipment blank.

Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Aroclor Initial and Continuing Calibration

7.1 Are the following Forms, chromatograms and data system printouts present?

a.) Form VI ARO-1/Aroclor Initial Calibration (Multipoint) [✓] ___ ___

	YES	NO	N/A
b.) Form VI ARO-2/Aroclor Initial Calibration (Multipoint)	✓		
c.) Form VI ARO-3/Aroclor Initial Calibration(Singlepoint)	✓		
d.) Form VII ARO/Aroclor Calibration Verification	✓		
e.) Form VIII ARO/Aroclor Analytical Sequence	✓		
f.) Form X ARO/Identification Summary for Multicomponent Analysis	✓		

7.2 Initial Calibration

	YES	NO	N/A
7.2.1 Was the following contract required initial calibration sequence provided by the laboratory?	✓		

Initial Calibration Sequence	
1.	Aroclor 1221 CS3
2.	Aroclor 1232 CS3
3.	Aroclor 1242 CS3
4.	Aroclor 1248 CS3
5.	Aroclor 1254 CS3
6.	Aroclor 1262 CS3
7.	Aroclor 1268 CS3
8.	Aroclor1016/1260 (100 ng/ml) CS1
9.	Aroclor1016/1260 (200 ng/ml) CS1
10.	Aroclor1016/1260 (400 ng/ml) CS1
11.	Aroclor1016/1260 (800 ng/ml) CS1
12.	Aroclor1016/1260 (1600 ng/ml) CS1
13.	Instrument Blank

ACTION: If initial calibration is not performed or not performed in the proper sequence, notify the TOPO and make a note in the data assessment.

	YES	NO	N/A
7.3 Are there any transcription/calculation errors between raw data and the Forms?		✓	

ACTION: If large errors exist, take action specified in section 3.1 above.

YES NO N/A

7.4 Mean Retention Time (RT) and RT Window

Were the following mean RT and RT window met: ☑ ___ ___

a.) The mean RT of each of the three to five major peaks were determined from the five-point initial calibration for all Aroclors

b.) RT window was calculated as ± 0.07 for each of the three to five major peaks and ± 0.05 and ± 0.10 for the surrogates tetrachloro-m-xylene and decachlorobiphenyl, respectively.

ACTION: If no, follow the action as specified in section 3.1.

7.5 Was at least one chromatogram from each of the Aroclor standards yield peaks that give deflection between 50-100% of full scale? ☑ ___ ___

ACTION: IF no, take action as specified in section 3.1.

7.6 Was the mean Calibration Factor (CF) calculated for the three to five major peaks of each Aroclor, as well as for the surrogates, over the initial calibration range? ☑ ___ ___

7.7 Were the Percent Relative Standard Deviation (%RSD) of the Calibration Factor for the three to five major peaks < 20% of each of the Aroclor compounds and surrogates? ☑ ___ ___

ACTION: If no, take action as specified in the following Table.

Initial Calibration Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
Initial calibration is not performed or not performed in proper sequence	Use Professional Judgment and notify Contract Lab Program (CLP) Project Officer	
%RSD exceeds allowable limits *	J	UJ
%RSD within allowable limits *	No qualification	

* %RSD < 20.0% for Aroclors and surrogates (tetrachloro-m-xylene and decachlorobiphenyl.

7.8 Continuing Calibration Verification (CCV) (Form VII)

Were the Absolute Retention Time (RT) for each Aroclor and surrogate in the mid-point concentration (CS3) of

YES NO N/A

the Standard used for CCV must be within the RT window determined from the initial calibration?

7.9 For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, the Percent Difference (%D) between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±15.0%.

7.10 For a closing CCV, the %D between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±50.0%.

7.11 No more than 14 hours may elapse from the injection of the instrument Blank that begins an analytical sequence (opening CCV) and the injection of the last mid-point concentration (CS3) of the Aroclor standards that ends an analytical sequence (closing CCV).

7.12 No more than 12 hours may elapse from the injection of the instrument blank that begins an analytical sequence (opening CCV and the injection of the last sample or blank that is part of the same analytical sequence.

Were sections 7.8 to 7.12 met? ✓ ___ ___

ACTION: If no, use the following table to qualify Aroclor data:

Continuing Calibration Verification (CCV) Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
RT out of RT Window	Use professional Judgment *	
Percent Difference not within limits ± 15% as specified in section 7.9 above	J	UJ
Percent Difference not within limits ± 50% as specified in section 7.10 above	J	UJ
Time elapsed is greater than acceptable limits as specified in section 7.11 & 7.12 above	R	
Percent Difference, time elapsed and RT are within acceptable limits	No qualification	

YES NO N/A

* For non-detected target compounds in the affected samples, check to see if the sample chromatogram contain any peak that are close to the expected RT window of the Aroclor of interest.

If no peaks are present, consider the non-detected values to be valid and no qualification of the data is necessary.

If any peaks are present close to the expected RT window of the Aroclor of interest, qualify the non-detected values as presumptively present "N".

For detected compounds in the affected samples, if the peaks are within the RT window, no qualification of the data is necessary. If the peaks are close to the expected RT window of the Aroclors of interest, the reviewer may take additional effort to determine if sample peaks represent the compound of interest.

For example, the reviewer can examine the data package for the presence of three or more standards containing the Aroclor of interest that were run within the analytical sequence during which the sample was analyzed. If three or more such standards are present, the RT window can be re-evaluated using the mean RT of the standards.

If the peaks in the affected sample fall within the revised window, qualify the detected Aroclor as "JN".

If the reviewer cannot do anything with the data to resolve the problem of concern, qualify all non-detects as unuseable "R".

8.0 Analytical Sequence Check (Form VIII-ARO)

8.1 Is Form VIII-Pest present and complete for each column and each period of analyses? ☑ ___ ___

ACTION: If no, take action as specified in section 3.1

8.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses, and all standards analyzed at the required frequency for each GC/ECD instrument used? ☑ ___ ___

ACTION: If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Generally, the effect is negligible unless the sequence was grossly altered and/or the calibration was out of QC limits.

8.3 Are the surrogate retention time (RT) from the initial calibration for TCX and DCB provided on Form VIII-Pest? ☑ ___ ___

YES NO N/A

ACTION: If no, take action as specified in section 3.1

8.4 Was the asterisk (*) applied to the RT of any blanks, samples, standards, MS/MSD, and LCS that did not meet the QC Limits of ± 0.05 minutes for TCX (tetrachloro-m-xylene) and ± 0.10 minutes for DCB (decachlorobiphenyl)? [ ] ___ ✓

ACTION: If any data are missing, take action specified in 3.1 above.

If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Document in the data assessment under Contract Problems/Non-Compliance.

9.0 Sulfuric Acid and Gel Permeation Chromatography (GPC) Cleanup Procedures

9.1 Was sulfuric acid added to all extracts? [✓] ___ ___

Note: Sulfuric acid cleanup is mandatory for all extracts

ACTION: If no, take action specified in section 3.1

9.2 Gel Permeation Chromatography (GPC

GPC is an optional cleanup procedure for both aqueous and non-aqueous samples that contain high molecular weight compounds that interfere with Aroclor analysis.

9.3 If GPC cleanup was performed on samples, GPC calibration is acceptable if the two UV traces meet the following requirements.

a. Peaks must be observed and should be symmetrical for all compounds in the calibration solution.

b. Corn oil and phthalate peaks should exhibit greater than 85% resolution.

c. The phthalate and Methoxychlor peaks should exhibit greater than 85% resolution.

d. Methoxychlor and perylene peaks should exhibit greater than 85% resolution.

e. Perylene and sulfur peaks must be saturated and should exhibit greater than 90% baseline resolution.

YES NO N/A

f. The RT shift is less than 5% between UV traces for bis(2-ethylhexylphthalate and perylene.

9.4 Were all above criteria met? ☑ ___ ___

ACTION: If no, examine the raw data for the presence of high molecular weight contaminants. Examine the subsequent sample data for unusual peaks and use professional judgment in qualifying the data.

10.0 Laboratory Control Samples (LCSs)

10.1 LCSs provide information on the accuracy of the analytical method and laboratory performance.

Aroclor Laboratory Control Sample Recovery - Aqueous and Non-Aqueous

Compound	% Recovery QC Limits
Aroclor 1016	50 - 150
Aroclor 1260	50 - 150
Tetrachloro-m-xylene (surrogate)	30 - 150
Decachlorobiphenyl (surrogate)	30 - 150

10.2 Were the above recoveries met? ☑ ___ ___

ACTION: If no, qualify the sample data as follows:

Criteria	ACTION	
	Detected Associated Compound	Non-Detected Associated Compound
%R> Upper Acceptance Limit	J	No qualification
%R< Lower Acceptance Limit	J	R
Lower Acceptance Limit < %R < Upper Acceptance Limit	No qualification	

YES NO N/A

11.0 Aroclor Identification (Form X ARO/Identification Summary for Multicomponent Analysis

11.1 Is Form X (ARO) complete for every sample in which Aroclor was detected? [✓] ___ ___

ACTION: Take action as specified in section 3.1 above.

11.2 The identification of a Multi component Aroclor by GC method is based primarily on RT data and pattern recognition. Were the following requirements met: [✓] ___ ___

a.) A Minimum of 3 major peaks were selected for each Aroclor. If more than one Aroclor is observed in a sample, a peak common to other Aroclor(s) must not be used to quantitate other Aroclor. Lab must choose different peaks to quantitate each Aroclor.

b.) If a chromatogram is replotted electronically to meet these requirements, the scaling factor used must be displayed on the chromatogram, and both the initial chromatogram and the replotted chromatogram must be submitted in the data package.

c.) The Retention Time (RT) of both of the surrogates and reported target compounds must be within the calculated RT window of both columns.

d.) When no analytes are identified in the sample, the chromatograms of the sample extract must use the same scaling factor used for the low-point standard of the initial calibration associated with those samples.

e.) Chromatogram must display the largest peak of any Aroclor detected in the sample at less than full scale.

f.) If an extract must be diluted, chromatograms must display Aroclor peaks between 25-100% of full scale.

ACTION: If retention times (RT) or peak apex cannot be verified, contact TOPO to obtain rescaled chromatograms from the lab.

If data reviewer identifies a peak in both GC columns that fall within the appropriate RT windows,

YES NO N/A

but was reported as non-detect, the compound may be false negative. If necessary, contact TOPO to instruct laboratory to re-evaluate the chromatograms.

11.3 Are there any transcription/calculation errors in Form I and Form X ARO? ___ ☑ ___

ACTION: Take action as specified in section 3.1 above.

11.4 Are the RTs of Aroclor peaks within the established RT window for analyses on both columns? ☑ ___ ___

11.5 Was the GC/MS confirmation provided for Aroclor concentration > 10 ug/ml in final extract? ☑ ___ ___

NOTE: Laboratory is required to contact SMO to determine if GC/MS confirmation is required. Check the semivolatile TIC data for presence of Aroclors.

11.6 Is the per cent difference (%D) calculated for positive results on both columns < 25%? ☑ ___ ___

ACTION: The reviewer must check columns for peak interferences for the positive hits. Qualify the Aroclor(s) according to following Table:

Action on Qualifying Positive Aroclor Results

Percent Differences	Qualifier
0 - 25%	None
26 - 70%	"J"
71 - 100%	"JN"
101 - 200% (No Peak Interferences)	"R"
101 - 200% (Interferences detected)*	"JN"
> 50% (Aroclor value < CRQL)**	"U"
> 200%	"R"

YES NO N/A

* When interferences is detected on either column, qualify the data as "JN"

** When the Aroclor value is below CRQL and %D > 50%, raise the value to CRQL and qualify "U", undetected.

12.0 Target Aroclor List (TCL)

12.1 Are the Aroclor Analysis Data Sheets (Form I ARO) present with required header information on each page for samples, MS/MSD (if required), method and instrument blanks (per column & analysis)? [ ] ___ ✓

12.2 Is the chromatographic performance acceptable with respect to baseline stability, full-scale attenuation, peak shape/resolution? ✓ ___ ___

ACTION: If no, take action specified in section 3.1 above.

13.0 Compound Quantitation and Reported Detection Limits

13.1 Are there any transcription/calculation errors in the Form I results? Check at least two positive results. Were any errors found? [ ] ✓ ___

ACTION: If errors were found, take action as specified in section 3.1 above.

13.2 Are the contract required quantitation limits (CRQL) adjusted to reflect sample dilution? ✓ ___ ___

ACTION: If errors exist, take action as specified in section 3.1 above.

ACTION: When a sample is required to be diluted, the lowest CRQL is used (unless a QC exceedance dictates the use of the higher CRQL from the diluted sample). Replace concentration which exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with the result from the diluted sample. Specify which Form I to use. Use a red pencil and draw a red "X" across the entire page of all Form I's that should not be used, including those in the data summary package.

At the top or bottom of the Forms, write with red pencil, "DO Not Use".

YES NO N/A

Note: If the sample dilution factor (DF) is greater than 10, an additional 10 times more concentrated than the diluted sample extract must be analyzed and reported with the sample data. If the DF is less or equal to 10, but greater than 1, the results of the original undiluted analysis must also be reported (see SOM01.1/section 10.3.3.4/page D-44/ARO).

ACTION: IF the above requirement was not met, contact the TOPO to obtain an explanation/resubmittal from the lab and make a note in the Data Assessment under Contract Problems/Non-Compliance section.

13.3 For non-aqueous samples, were the percent moisture < 70%? [✓] ___ ___

Action: If the % moisture ≥ 70.0% and < 90.0%, qualify detects as "J" and non-detects as approximated "UJ" If the % Moisture ≥ 90%, qualify detects as "J" and non-detects as "R"

14.0 Field Duplicates

14.1 Were any field duplicates submitted for Aroclor analysis? [ ] ___ [✓]

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. If large differences exist, contact the TOPO to confirm identification of field duplicates with the sampler.

YES NO N/A

Definitions

ARO - Aroclor
CCS - contract compliance screening
CF - Calibration Factor
CLASS - Contract Laboratory Analytical Services Support
CLP - Contract Laboratory Program
CRQL - Contract Required Quantitation Limit
GC/ECD - Gas Chromatography/Electron Capture Detector
kg - kilogram
µg - microgram
ℓ - liter
mℓ - milliliter
QC - quality control
RAS - Routine Analytical Services
RPD - Relative Percent Difference
RRF - Relative Response Factor
$\overline{RRF}$ - Average Relative Response Factor (from initial calibration)
RRT - Relative Retention Time
RSD - Relative Standard Deviation
RT - Retention Time
RSCC - Regional Sample Control Center
SDG - Sample Delivery Group
SOP - standard operating procedure
SOW - Statement of Work
TCL - Target Compound List
TCLP - Toxicity Characteristics Leachate Procedure
TIC - Tentatively Identified Compound
TPO - Technical Project Officer
VTSR - Validated Time of Sample Receipt
TOPO - Task Order Project Officer

YES NO N/A

References

1. USEPA Contract Laboratory Program of Work for Organic Analysis Multi-Media, Multi-Concentration, SOW/CLP/SOM01.1, October 2004
2. National Functional Guidelines for Superfund Organic Methods Data Review January 2005

Request for Quote (RFQ) for Modified Analysis

Date: December 6, 2007

Subject: Modification Reference Number: 1508.0
Title: Filtration of Water Samples
Sample Matrix: Water
Fraction Affected: Aroclors
Statement of Work: SOM01.2

Purpose:

The Contractor Laboratory is requested to perform the following modified analyses under the Organic Statement of Work (SOW) SOM01.2, based on the additional specifications listed below. Unless specifically modified by this modification, all analyses, Quality Control (QC), and reporting requirements specified in SOW SOM01.2 remain unchanged and in full force and effect. The number of samples requested in this modification is not guaranteed.

Please note that accepting a modified analysis request is voluntary, and that the Laboratory is not required to accept the modified analysis. There will be no adverse effect to the Laboratory for not accepting the modified analysis request. However, once the Laboratory accepts the request for modified analysis, it shall perform the analysis in accordance with this modification and as specified in SOW SOM01.2.

The Laboratory is requested to review the modification described herein, determine whether or not it shall accept the requested modified analyses, and complete the attached response form. The Laboratory shall provide comments in response to the required changes in the designated area, in order to ensure that the modified analysis can be completed in accordance with the specifications described herein.

The requirements in the RFQ are as stated and any defects will be assessed by SMO per the laboratory contract. The Laboratory should take this into account when submitting their quote.

Notice to Contractors: Acceptance of Modified Analysis samples will not count against the monthly capacity.

Modification to the SOW Specifications:

SOW SOM01.2 requires the Laboratory to analyze water samples for the Aroclor target compounds and Contract Required Quantitation Limits (CRQLs) listed in Exhibit C, Section 4.0, using the protocol outlined in Exhibit D, Analytical Method for the Analysis of Aroclors.

In this modified analysis request, water samples scheduled for Aroclor analyses must be filtered prior to extraction using a 0.45um filter, so that any sediment captured in these aqueous samples are removed. To facilitate the process each sample must be filtered with a new, clean filter. The laboratory will not use the same filter for more than one sample.

Reporting Requirements:

Hardcopy and electronic data reporting are required as specified per SOW SOM01.2. All hardcopy and electronic data shall be adjusted to incorporate modified specifications. This includes attaching a copy of the requirements for modified analysis to the SDG Narrative. If specific problems occur with incorporation of the modified analysis into the hardcopy and/or electronic deliverable, the Laboratory shall contact the DASS Manager within the Sample Management Office (SMO) at (703) 818-4233 or via e-mail at CCSSUPPORT@fedcsc.com for resolution.

All samples and/or fractions assigned to an SDG shall be analyzed under the same Modified Analysis requirements as established in this memorandum. The Laboratory shall not include data from multiple Modified Analyses in one SDG.

The Laboratory shall include the Modification Reference Number 1508.0 on each hardcopy data form under the "Mod. Ref. No." header appearing on each form as well as the data element "ServicesID" under the "SamplePlusMethod" node of the EDD. This should be done for the fractions affected by the modified analysis only. The "ServicesID" field should remain blank for all other fractions reported in the SDG. The Laboratory shall also document the Modification Reference Number and the Solicitation Number on the SDG Coversheet.

Clarifications/Revisions to the RFQ for Modified Analysis:

Laboratory Name: MITKEM
Laboratory Comments:

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to USEPA Case # 37088 and SDG# B4HZ0. Analyses were performed for fourteen aqueous samples that were received on December 28, 2007. The analyses were performed under USEPA Contract # EP-W-05-030. Please note that four sample-shipping coolers were received on December 28. The temperature of the coolers were measured at 1°C, 3°C, 3°C and 1°C.

The samples were analyzed under Modified Analysis 1508.0, to filter the aqueous samples through a 0.45µm filter prior to extraction. A copy of the requirements for Modified Analysis 1508.0 is included following the SDG narrative

Tags were not received with the samples. Per the Region, proceed with analysis of the samples. Region 2 does not require sample tags.

The following samples are submitted in this data package:

Client ID	Lab ID	Analysis
B4QE0	F1937-01A	A
B4QE1	F1937-02A	A
B4QE2	F1937-03A	A
B4QE3	F1937-04A	A
B4QE4	F1937-05A	A
B4QE5	F1937-06A	A
B4QE6	F1937-07A	A
B4QE7	F1937-08A	A
B4QE8	F1937-09A	A
B4QE9	F1937-10A	A
B4QF0	F1937-11A	A
B4QF1	F1937-12A	A
B4QF1MS	F1937-12AMS	A
B4QF1MSD	F1937-12AMSD	A
B4QF2	F1937-13A	A
B4QF3	F1937-14A	A

A = Aroclors

The analyses were performed using USEPA CLP Multi-Media, Multi-Concentration (SOM01.2) protocols. The analyses were performed with strict adherence to the SOW with the following exceptions and observations:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.
- M4 retention time shift.
- M5 miscellaneous – under this category, the justification is explained.
- M6 software did not integrate peak
- M7 partial peak integration

2. Aroclor Analysis

GC column used: 30 m x 0.53 mm id (0.42 um film thickness) CLPPestII and 30 m x 0.53 mm id (0.5 um film thickness) CLPPest megabore columns

The concentration of target analytes were determined using the following equation:

$$\text{Concentration } (\mu g/L) = \frac{(Amt)(DF)(UF)(V_t)}{(V_o * V_i)}$$

where: Amt = Lower value of two Conc
DF = Dilution Factor
UF = Correction Factor
V_t = Volume of final extract (µL)
V_i = Volume of sample injected (µL)
V_o = Volume of sample extracted (mL)

Surrogate recoveries were within the QC limits.

Spike recoveries were within the QC limits in the lab control sample.

Matrix spike and matrix spike duplicate were performed on sample B4QF1. Spike recoveries and replicate RPDs were within the advisory QC limits.

Manual integration was performed on Aroclor 1242 in the rear column for AR12421H1 due to M4.

No other unusual observation was made for the analysis.

All of the submittals to the region are originals other than logbook pages. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. Tunes, calibration verifications and initial calibrations that are shared among several cases are photocopies indicating the location of the originals.

I certify that this Sample Data Package is in compliance with the terms and condition of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Agnes Ng
CLP Project Manager
01/11/08

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to USEPA Case # 37088 and SDG# B4JB1. Analyses were performed for twenty soil samples that were received on December 20, 2007. The analyses were performed under USEPA Contract # EP-W-05-030. Please note that two sample-shipping coolers were received. The coolers were measured at 1°C and 3°C.

Tags were not received with the samples. Per the Region, proceed with analysis of the samples. Region 2 does not require sample tags.

The following samples are submitted in this data package:

Client ID	Lab ID	Analysis
B4JB1	F1912-01A	A
B4JB1DL	F1912-01ADL	A
B4JB2	F1912-02A	A
B4JB2DL	F1912-02ADL	A
B4JB3	F1912-03A	A
B4JB3DL	F1912-03ADL	A
B4JB3MS	F1912-03AMS	A
B4JB3MSD	F1912-03AMSD	A
B4JB4	F1912-04A	A
B4JB4DL	F1912-04ADL	A
B4JB5	F1912-05A	A
B4JB5DL	F1912-05ADL	A
B4JB6	F1912-06A	A
B4JB6DL	F1912-06ADL	A
B4JB7	F1912-07A	A
B4JB7DL	F1912-07ADL	A
B4JB8	F1912-08A	A
B4JB8DL	F1912-08ADL	A
B4JB9	F1912-09A	A
B4JB9DL	F1912-09ADL	A
B4JC0	F1912-10A	A
B4JC0DL	F1912-10ADL	A
B4JC1	F1912-11A	A
B4JC1DL	F1912-11ADL	A
B4JC2	F1912-12A	A
B4JC2DL	F1912-12ADL	A
B4JC4	F1912-13A	A
B4JC4DL	F1912-13ADL	A
B4JC5	F1912-14A	A
B4JC5DL	F1912-14ADL	A

B4JC6	F1912-15A	A
B4JC6DL	F1912-15ADL	A
B4JC7	F1912-16A	A
B4JC7DL	F1912-16ADL	A
B4JC8	F1912-17A	A
B4JC8DL	F1912-17ADL	A
B4JC9	F1912-18A	A
B4JC9DL	F1912-18ADL	A
B4JD0	F1912-19A	A
B4JD0DL	F1912-19ADL	A
B4JD1	F1912-20A	A
B4JD1DL	F1912-20ADL	A

A = Aroclors

The analyses were performed using USEPA CLP Multi-Media, Multi-Concentration (SOM01.2) protocols. The analyses were performed with strict adherence to the SOW with the following exceptions and observations:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.
- M4 retention time shift.
- M5 miscellaneous – under this category, the justification is explained.
- M6 software did not integrate peak
- M7 partial peak integration

2. Aroclor Analysis

GC column used: 30 m x 0.53 mm id (0.42 um film thickness) CLPPestII and 30 m x 0.53 mm id (0.5 um film thickness) CLPPest megabore columns

The following equation was used to calculate the concentration of target analytes for soil samples:

$$\text{Concentration (ug/Kg)} = (\text{Amt})(\text{DF})(\text{Uf})\left(\frac{\text{Vt}}{(\text{Vi} * \text{WS} * \left(\frac{100 - \text{m}}{100}\right)}\right)$$

where: Amt = Lower value of two Conc
DF = Dilution factor
UF = ng unit correction factor
WS = Weight of sample extracted (g)
Vt = Volume of final extract (uL)
Vi = Volume injected (uL)
M = %moisture (not decanted)

Surrogate recoveries were within the QC limits with the exception of low recovery of decachlorobiphenyl in one column for sample B4JC5 and surrogates diluted in samples B4JB2DL, B4JB3DL, B4JB9DL, B4JC0DL and B4JC1DL.

Spike recoveries were within the QC limits in the lab control sample.

Matrix spike and matrix spike duplicate were performed on sample B4JB3. Spike recoveries were within the advisory QC limits with the exception of high recovery of both Aroclor 1016 and Aroclor 1260 in both columns for the matrix spike and matrix spike duplicate. Replicate RPDs were not within the advisory QC limits for either Aroclor. Please note that the high recovery of Aroclors 1016 and 1260 are probably due to co-eluting peaks from the high concentration of Aroclor 1254 in the native sample.

The following samples were initially analyzed at dilution: B4JB2 (10x), B4JB3 (10x), B4JB9 (20x), B4JC0 (20x), B4JC1 (10x), B4JC2 (5x), B4JC4 (2x), B4JC6 (5x), B4JC8 (5x), B4JD0 (2x) and B4JD1 (2x).

To ensure that all target analytes were determined within the instrument calibration range, the following samples were re-analyzed at dilution: B4JB1 (10x), B4JB2 (100x), B4JB3 (100x), B4JB4 (10x), B4JB5 (10x), B4JB6 (10x), B4JB7 (10x), B4JB8 (10x), B4JB9 (200x), B4JC0 (200x), B4JC1 (100x), B4JC2 (50x), B4JC4 (20x), B4JC5 (10x), B4JC6 (50x), B4JC7 (10x), B4JC8 (50x), B4JC9 (10x), B4JD0 (20x) and B4JD1 (20x).

Per the Region, GC/MS confirmation is not required for those samples in which the Aroclor concentration is greater than 3300ug/Kg.

Manual integration was performed on Aroclor 1242 in the rear column for AR12421H1 due to M4.

No other unusual observation was made for the analysis.

All of the submittals to the region are originals other than logbook pages. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. Tunes, calibration verifications and initial calibrations that are shared among several cases are photocopies indicating the location of the originals.

I certify that this Sample Data Package is in compliance with the terms and condition of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Agnes Ng
CLP Project Manager
01/09/08

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to USEPA Case # 37088 and SDG# B4JK1. Analyses were performed for seven soil samples that were received on December 21, 2007. The analyses were performed under USEPA Contract # EP-W-05-030. Please note that two sample-shipping coolers were received on December 21. Both coolers were measured at 3°C.

Tags were not received with the samples. Per the Region, proceed with analysis of the samples. Region 2 does not require sample tags.

The following samples are submitted in this data package:

Client ID	Lab ID	Analysis
B4JK3	F1926-01A	A
B4JK3DL	F1926-01ADL	A
B4JK4	F1926-02A	A
B4JK4DL	F1926-02ADL	A
B4JK5	F1926-03A	A
B4JK5DL	F1926-03ADL	A
B4JK6	F1926-04A	A
B4JK6DL	F1926-04ADL	A
B4JK7	F1926-05A	A
B4JK7DL	F1926-05ADL	A
B4JK8	F1926-06A	A
B4JK8DL	F1926-06ADL	A
B4JK1	F1926-07A	A
B4JK1DL	F1926-07ADL	A
B4JK1MS	F1926-07AMS	A
B4JK1MSD	F1926-07AMSD	A

A = Aroclors

The analyses were performed using USEPA CLP Multi-Media, Multi-Concentration (SOM01.2) protocols. The analyses were performed with strict adherence to the SOW with the following exceptions and observations:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action.

The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.
- M4 retention time shift.
- M5 miscellaneous – under this category, the justification is explained.
- M6 software did not integrate peak
- M7 partial peak integration

2. Aroclor Analysis

GC column used: 30 m x 0.53 mm id (0.42 um film thickness) CLPPestII and 30 m x 0.53 mm id (0.5 um film thickness) CLPPest megabore columns

The following equation was used to calculate the concentration of target analytes for soil samples:

$$\text{Concentration (ug/Kg)} = (\text{Amt})(\text{DF})(\text{Uf})\left(\frac{\text{Vt}}{(\text{Vi} * \text{WS} * \left(\frac{100 - \text{m}}{100}\right)}\right)$$

where: Amt = Lower value of two Conc
DF = Dilution factor
UF = ng unit correction factor
WS = Weight of sample extracted (g)
Vt = Volume of final extract (uL)
Vi = Volume injected (uL)
M = %moisture (not decanted)

Surrogate recoveries were within the QC limits with the exception surrogates diluted out in samples B4JK3DL, B4JK4DL, B4JK5DL, B4JK7 and B4JK7DL.

Spike recoveries were within the QC limits in the lab control sample.

Matrix spike and matrix spike duplicate were performed on sample B4JK1. Spike recoveries were within the advisory QC limits with the exception of high recovery of Aroclor 1260 in column CLPPestII for both the matrix spike and matrix spike duplicate and high recovery of Aroclor 1260 in the matrix spike and high recovery of both Aroclor 1016 and 1260 in the matrix spike duplicate for column CLPPest. Replicate RPDs were not within the advisory QC limits for both Aroclor 1016 and 1260 in both columns.

Please note that the high recovery of Aroclor 1260 is probably due to co-eluting peaks from the high concentration of Aroclor 1254 in the native sample.

The following samples were initially analyzed at dilution: B4JK3 (50x), B4JK4 (50x), B4JK5 (5x) and B4JK7 (50x).

To ensure that all target analytes were determined within the instrument calibration range, the following samples were re-analyzed at dilution: B4JK1 (10x), B4JK3 (500x), B4JK4 (500x), B4JK5 (50x), B4JK6 (10x), B4JK7 (500x) and B4JK8 (10x).

Per the Region, GC/MS confirmation is not required for those samples in which the Aroclor concentration is greater than 3300ug/Kg.

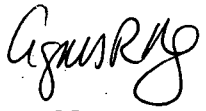
N0 manual integrations were performed.

The pH of sample B4JK6 was measured to be 4.5, which is outside the range of 5 to 11.

No other unusual observation was made for the analysis.

All of the submittals to the region are originals other than logbook pages. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. Tunes, calibration verifications and initial calibrations that are shared among several cases are photocopies indicating the location of the originals.

I certify that this Sample Data Package is in compliance with the terms and condition of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.



Agnes Ng
CLP Project Manager
01/10/08

SDG Narrative

Mitkem Corporation submits the enclosed data package in response to USEPA Case # 37088 and SDG# B4JC3. Analyses were performed for twenty soil samples that were received on December 20 and 21, 2007. The analyses were performed under USEPA Contract # EP-W-05-030. Please note that the sample-shipping cooler received on December 20 was measured at 3°C. The cooler received on December 21 was measured at 3°C.

Tags were not received with the samples. Per the Region, proceed with analysis of the samples. Region 2 does not require sample tags.

The following samples are submitted in this data package:

Client ID	Lab ID	Analysis
B4JC3	F1913-01A	A
B4JC3MS	F1913-01AMS	A
B4JC3MSD	F1913-01AMSD	A
B4JD3	F1913-02A	A
B4JD3DL	F1913-02ADL	A
B4JD4	F1913-03A	A
B4JD4DL	F1913-03ADL	A
B4JD5	F1913-04A	A
B4JD5DL	F1913-04ADL	A
B4JD6	F1913-05A	A
B4JD6DL	F1913-05ADL	A
B4JD7	F1913-06A	A
B4JD7DL	F1913-06ADL	A
B4JD8	F1913-07A	A
B4JD8DL	F1913-07ADL	A
B4JD9	F1913-08A	A
B4JD9DL	F1913-08ADL	A
B4JE0	F1913-09A	A
B4JE0DL	F1913-09ADL	A
B4JE1	F1913-10A	A
B4JE1DL	F1913-10ADL	A
B4JE2	F1913-11A	A
B4JE2DL	F1913-11ADL	A
B4JE3	F1913-12A	A
B4JE3DL	F1913-12ADL	A
B4JE4	F1913-13A	A
B4JE4DL	F1913-13ADL	A
B4JE6	F1913-14A	A
B4JE6DL	F1913-14ADL	A

B4JE7	F1913-15A	A
B4JE7DL	F1913-15ADL	A
B4JE8	F1913-16A	A
B4JE8DL	F1913-16ADL	A
B4JE9	F1913-17A	A
B4JE9DL	F1913-17ADL	A
B4JF0	F1913-18A	A
B4JF0DL	F1913-18ADL	A
B4JF1	F1913-19A	A
B4JF1DL	F1913-19ADL	A
B4JF2	F1913-20A	A
B4JF2DL	F1913-20ADL	A

A = Aroclors

The analyses were performed using USEPA CLP Multi-Media, Multi-Concentration (SOM01.2) protocols. The analyses were performed with strict adherence to the SOW with the following exceptions and observations:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.
- M4 retention time shift.
- M5 miscellaneous – under this category, the justification is explained.
- M6 software did not integrate peak
- M7 partial peak integration

2. Aroclor Analysis

GC column used: 30 m x 0.53 mm id (0.42 um film thickness) CLPPestII and 30 m x 0.53 mm id (0.5 um film thickness) CLPPest megabore columns

The following equation was used to calculate the concentration of target analytes for soil samples:

$$\text{Concentration (ug/Kg)} = (\text{Amt})(\text{DF})(\text{Uf})\left(\frac{\text{Vt}}{(\text{Vi} * \text{WS} * \left(\frac{100 - \text{m}}{100}\right)}\right)$$

where: Amt = Lower value of two Conc
DF = Dilution factor
UF = ng unit correction factor
WS = Weight of sample extracted (g)
Vt = Volume of final extract (uL)
Vi = Volume injected (uL)
M = %moisture (not decanted)

Surrogate recoveries were within the QC limits with the exception of low recovery of decachlorobiphenyl in one column for sample B4JE0 and surrogates diluted in samples B4JD3DL, B4JD4DL, B4JD5DL, B4JD7DL, B4JD8DL, B4JE2DL, B4JE3DL, B4JF1DL, B4JE6DL and B4JF0DL.

Spike recoveries were within the QC limits in the lab control sample.

Matrix spike and matrix spike duplicate were performed on sample B4JC3. Spike recoveries were within the advisory QC limits with the exception of high recovery of Aroclor 1260 in both columns for the matrix spike and matrix spike duplicate. Replicate RPDs were within the advisory QC limits. Please note that the high recovery of Aroclor 1260 is probably due to co-eluting peaks from the high concentration of Aroclor 1254 in the native sample.

The following samples were initially analyzed at dilution: B4JD3 (10x), B4JD4 (10x), B4JD5 (10x), B4JD6 (2x), B4JD7 (10x), B4JB8 (10x), B4JE2 (5x), B4JE3 (10x), B4JE6 (2x), B4JF0 (2x) and B4JF1 (10x).

To ensure that all target analytes were determined within the instrument calibration range, the following samples were re-analyzed at dilution: B4JD3 (100x), B4JD4 (100x), B4JD5 (100x), B4JD6 (20x), B4JD7 (100x), B4JB8 (100x), B4JB9 (10x), B4JE0 (5x), B4JE1 (5x), B4JE2 (50x), B4JE3 (100x), B4JE4 (10x), B4JE6 (20x), B4JE7 (10x), B4JE8 (4x), B4JE9 (10x), B4JF0 (20x), B4JF1 (100x) and B4JF2 (10x).

The second peak for sample B4JE8 exceeded the instrument calibration range on both the front and rear column. Therefore a dilution was performed even though there is no "E" flag on the data report form.

Per the Region, GC/MS confirmation is not required for those samples in which the Aroclor concentration is greater than 3300ug/Kg.

Manual integration was performed on Aroclors 1016 and 1260 in the front column for AR16604S2 due to M3.

No other unusual observation was made for the analysis.

All of the submittals to the region are originals other than logbook pages. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. Tunes, calibration verifications and initial calibrations that are shared among several cases are photocopies indicating the location of the originals.

I certify that this Sample Data Package is in compliance with the terms and condition of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Agnes Ng
CLP Project Manager
01/10/08

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Contract Laboratory Program

Sample Delivery Group (SDG)

Cover Sheet

SDG Number B4QE0

Laboratory Name	Mitkem Laboratories	Lab Code	MITKEM
Contract No.	EP-W-05-030	Case No.	37088
Analysis Price	$ 0.00	SDG Turnaround	21 days

EPA Sample Numbers in SDG (Listed in Numerical Order)

01) B4QE0	08) B4QE7	15) B4QF2	
02) B4QE1	09) B4QE8	16) B4QF3	
03) B4QE2	10) B4QE9		
04) B4QE3	11) B4QF0		
05) B4QE4	12) B4QF1		
06) B4QE5	13) B4QF1MS		
07) B4QE6	14) B4QF1MSD		

First Sample in SDG	Last Sample in SDG
B4QE0	B4QF3

First Sample Receipt Date	Last Sample Receipt Date
12/28/2007	12/28/2007

Note: There are a maximum of 20 field samples [excluding Performance Evaluation (PE) samples in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).

Signature _____ Date 1/7/2008

Modified Analysis 1508.0

Contract Laboratory Program

Sample Delivery Group (SDG)

Cover Sheet

SDG Number B4JB1

Laboratory Name	Mitkem Laboratories	Lab Code	MITKEM
Contract No.	EP-W-05-030	Case No.	37088
Analysis Price	$ 0.00	SDG Turnaround	21 days

EPA Sample Numbers in SDG (Listed in Numerical Order)

01) B4JB1	08) B4JB6	15) B4JC4	22) B4JD1
02) B4JB2	09) B4JB7	16) B4JC5	
03) B4JB3	10) B4JB8	17) B4JC6	
04) B4JB3MS	11) B4JB9	18) B4JC7	
05) B4JB3MSD	12) B4JC0	19) B4JC8	
06) B4JB4	13) B4JC1	20) B4JC9	
07) B4JB5	14) B4JC2	21) B4JD0	

First Sample in SDG	Last Sample in SDG
B4JB1	B4JD1
First Sample Receipt Date	**Last Sample Receipt Date**
12/20/2007	12/20/2007

Note: There are a maximum of 20 field samples [excluding Performance Evaluation (PE) samples in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).

Signature _____ Date 12/24/2007

Contract Laboratory Program

Sample Delivery Group (SDG)

Cover Sheet

SDG Number B4JK1

Laboratory Name	Mitkem Laboratories	Lab Code	MITKEM
Contract No.	EP-W-05-030	Case No.	37088
Analysis Price	$ 0.00	SDG Turnaround	21 days

EPA Sample Numbers in SDG (Listed in Numerical Order)

01) B4JK1	08) B4JK7
02) B4JK1MS	09) B4JK8
03) B4JK1MSD	
04) B4JK3	
05) B4JK4	
06) B4JK5	
07) B4JK6	

First Sample in SDG	Last Sample in SDG
B4JK1	B4JK8
First Sample Receipt Date	**Last Sample Receipt Date**
12/21/2007	12/21/2007

Note: There are a maximum of 20 field samples [excluding Performance Evaluation (PE) samples in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).

Signature _____ Date 12/31/2007

Contract Laboratory Program

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HAZ. WASTE SUPPORT SEC

Sample Delivery Group (SDG)

Cover Sheet

SDG Number B4JC3

Laboratory Name	Mitkem Laboratories	Lab Code	MITKEM
Contract No.	EP-W-05-030	Case No.	37088
Analysis Price	$ 0.00	SDG Turnaround	21 days

EPA Sample Numbers in SDG (Listed in Numerical Order)

01) B4JC3	08) B4JD7	15) B4JE4	22) B4JF2
02) B4JC3MS	09) B4JD8	16) B4JE6	
03) B4JC3MSD	10) B4JD9	17) B4JE7	
04) B4JD3	11) B4JE0	18) B4JE8	
05) B4JD4	12) B4JE1	19) B4JE9	
06) B4JD5	13) B4JE2	20) B4JF0	
07) B4JD6	14) B4JE3	21) B4JF1	

First Sample in SDG: B4JC3

Last Sample in SDG: B4JF2

First Sample Receipt Date: 12/20/2007

Last Sample Receipt Date: 12/21/2007

Note: There are a maximum of 20 field samples [excluding Performance Evaluation (PE) samples in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).

Signature _____ Date 12/24/2007

Agnes Ng

From: "Von Moll, Kristin" <kvonmoll@fedcsc.com>
To: "Agnes Ng" <agnes_ng@mitkem.com>; "Shirley Ng" <sng@mitkem.com>
Cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>; "Adly Michael" <Michael.Adly@epamail.epa.gov>; "Jennifer Ferranda" <feranda.jennifer@epa.gov>
Sent: Monday, December 31, 2007 1:27 PM
Subject: Region 02 | Case 37088 | Lab MITKEM | Issue Non-sampler issues | FINAL

Agnes,

Summary Start
Issue: Samples tags were not received with the samples.
Resolution: In accordance with previous direction from Region 2, the laboratory will note the issue in the SDG Narrative, and proceed with the analysis of the samples. Region 2 does not require sample tags.
Summary End

Please let me know if you have any other questions.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

From: Rudolph, Elizabeth
Sent: Monday, December 31, 2007 1:14 PM
To: Von Moll, Kristin
Subject: FW: Case 37073

From: Agnes Ng [mailto:agnes_ng@mitkem.com]
Sent: Monday, December 31, 2007 12:08 PM
To: Rudolph, Elizabeth
Subject: Case 37073

Hi Beth,

Tags were not received with the samples.

Thanks,
Agnes Ng
CLP Project Manager
(P) 401-732-3400 x316
(F) 401-732-3499

Agnes Ng

From: "Von Moll, Kristin" <kvonmoll@fedcsc.com>
To: "Agnes Ng" <agnes_ng@mitkem.com>; "Shirley Ng" <sng@mitkem.com>
Cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>; "Adly Michael" <Michael.Adly@epamail.epa.gov>; "Jennifer Ferranda" <feranda.jennifer@epa.gov>
Sent: Tuesday, January 08, 2008 2:33 PM
Subject: Region 02 | Case 37088 | Lab MITKEM | Issue Laboratory problems | FINAL

Agnes,

Summary Start
Issue: The samples are pretty loaded with Aoclor(s). Per the SOW, GC/MS confirmation is required for Aroclor concentrations above 3300ug/Kg. The laboratory would like to know if GC/MS confirmation is required for all of the samples.
Resolution: Per Region 2, GC/MS confirmation is not required. The laboratory should note the issue in the SDG Narrative and proceed with the analysis of the samples.
Summary End

Please let me know if you have any other questions.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

-----Original Message-----
From: Michael.Adly@epamail.epa.gov [mailto:Michael.Adly@epamail.epa.gov]

Sent: Tuesday, January 08, 2008 2:20 PM
To: Von Moll, Kristin
Cc: Rudolph, Elizabeth; feranda.jennifer@epa.gov
Subject: Re: NEW ISSUE #1 | Case 37088 | Lab MITKEM | Issue Laboratory problems

Kristin,

Please advise the lab that GC/MS confirmation is not required.

Thanks

Adly A Michael
Region2 - HWSB - HWSS
Phone: (732) 906-6161
Fax: (732) 321-6622

"Von Moll, Kristin" <kvonmoll@fedcsc.com>
01/08/2008 12:20 PM

To: Adly Michael/R2/USEPA/US@EPA, Jennifer Feranda/R2/USEPA/US@EPA
cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>
Subject: NEW ISSUE #1 | Case 37088 | Lab MITKEM | Issue Laboratory problems

Hi Adly,

MITKEM is reporting the following issue regarding Case 37088.

Issue: The samples are pretty loaded with Aoclor(s). Per the SOW, GC/MS confirmation is required for Aroclor concentrations above 3300ug/Kg. The laboratory would like to know if GC/MS confirmation is required for all of the samples.

Please advise on how the laboratory should proceed.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

written agreement or government initiative expressly permitting the use of e-mail for such purpose.

From: Agnes Ng [mailto:agnes_ng@mitkem.com]
Sent: Tuesday, January 08, 2008 12:00 PM
To: Von Moll, Kristin
Subject: Case 37088

Hi Kristin,

I am writing in regards to GC/MS confirmation. The samples are pretty loaded with Aroclor(s). Per the SOW, GC/MS confirmation is required for Aroclor concentrations above 3300ug/Kg. Do we have to do GC/MS confirmation for all these samples?

Thanks,
Agnes Ng
CLP Project Manager
(P) 401-732-3400 x316
(F) 401-732-3499
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